SELECTIONS FROM THE RECORDS OF THE MADRAS GOVERNMENT.

REPORT

ON

VACCINATION

FOR 1869.

No. XXI.

Selections from the Records of the Madras Government.

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REPORT ON VACCINATION

THROUGHOUT

THE PRESIDENCY AND PROVINCES

OF

MADRAS,

IN THE YEAR

1869.

PUBLISHED BY AUTHORITY.

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OFFICE OF INSPECTOR-GENERAL,
INDIAN MEDICAL DEPARTMENT,
FORT ST. GEORGE, 16*th August* 1870.

From

W. MACKENZIE, ESQ., C.B., C.S.I., A.M. & M.D.,
Inspector-General, Indian Medical Department,
Fort Saint George.

To

THE HONOURABLE R. S. ELLIS, C.B.,
Chief Secretary to Government, Public Department,
Fort Saint George,

SIR,—I have the honour to submit herewith the Report of the Superintendent-General of Vaccination on the working of his Department, during the year 1869.

2. As this was the first complete year in which the staff, as re-organized in 1868, was in operation, it would scarcely be fair to contrast results with those of previous periods, or to attempt to estimate the efficiency of the new system.

3. *Subordinate Staff of the Department.*—The establishment was, owing to deaths, desertions, dismissals, &c., below the sanctioned strength throughout the year, and the deficiencies chiefly existed in the grade of Vaccinators. Considerable difficulty was experienced in getting competent men to fill up vacancies in the lower ranks of the department, and, with the view of securing a superior class of candidates, the prospect of elevation to the grade of Superintendent was set before those who may pass the necessary examination, and prove deserving of promotion. The efficient control of the Superintendents proved a very formidable task, owing to the great distances at which they are scattered over the Presidency, and their inexperience in, or inaptitude for the management of a staff of subordinates. The introduction of the rule, requiring candidates to agree to serve for three years in the department, or to refund one-half of the salary drawn during the period they shall have served, is expected to have a salutary effect in preventing resignation and desertion. During the

year Rupees 311-0-2 were recovered from Vaccinators who resigned. The Subordinate Staff at the close of the year was as follows :—

Grades.	East Indians.	Hindus.	Mahomedans.	Native Christians.	Brahmins.	Total.
Superintendents	2	13	4	2	2	23
Vaccinators	9	164	33	14	5	225

It would thus appear that there were then no less than thirty vacancies in the grade of Vaccinator, the sanctioned complement being 255.

4. *Numbers vaccinated, &c.*—The number vaccinated during the year was 2,55,685, being 9,011 less than in 1868. The decrease, however, was not attributable to Dr. Shortt's Department, but to a falling off in the numbers of operations performed by Medical Subordinates, Municipal Vaccinators, Railway Medical Subordinates, and the Medical Staff of Civil Dispensaries. The attention of Medical Officers and Subordinates has been specially directed to this decline, and strict injunctions issued, requiring them to devote more attention to the spread of vaccination. The returns show an excess of 35,107 in the number of males, as compared with that of the other sex operated on during the year. This is doubtless, in a great measure, attributable to the recluse life which the social customs and prejudices of the people of this country impose on females.

As regards the Hindu and Mahomedan sections of the community, the number of the former vaccinated by the department was 2,25,153, and of the latter 13,928. The number of Europeans and East Indians operated on by it was only 1,694.

5. *Results of Operations.*—The proportion of successful operations varied as usual, ranging from 97·992 per cent. in Tanjore, to 84·234 in the Ganjam Hill Tracts.

6. *Comparative Statement of work in the different Districts.*—The largest amount of work during the year was performed in South Arcot, and the districts exhibiting the next largest returns of operations were North Arcot, Nellore, Tanjore, and Coimbatore. Kurnool has again the notoriety of having afforded the lowest number of subjects. A Statement of the actual number vaccinated in each Collectorate will be found in paragraph 19 of Dr. Shortt's Report.

7. *Zemindary and Municipal Vaccinators.*—There were sixty-nine Vaccinators employed by Zemindars during the year, and Government will learn with satisfaction that the number of operations performed

by them shows an increase of 3,808 as compared with the results of 1868. Various Municipalities employed twenty Vaccinators; but I regret to say, that their returns show a decrease in operations to the extent of eighty-five, as compared with the total of the previous year.

8. *Measures used and difficulties encountered in promoting Vaccination.*—The Superintendents were instructed to use every possible means to gain the good will and moral support of the District Civil Officials, and the plan was continued of sending out Vaccinators to explain to the villagers the advantages of vaccination, in the form of a story. Vernacular treatises on the subject were also freely circulated. To keep the Civil authorities acquainted with the amount of work done, a list was given at the conclusion of each visit to a village to the headman, containing the names, &c., of all who had been vaccinated within the bounds of his jurisdiction. These lists, if carefully rendered and kept, will be of great value, as they will hereafter show the actual number vaccinated in each village, afford valuable information as to the protective influence of the operation, and serve as checks on the future returns of Vaccinators. In reviewing the various difficulties that obstruct the spread of vaccination Dr. Shortt earnestly recommends, that it should be rendered compulsory by Legislative enactment. I am of opinion, however, that the time has not yet arrived for the introduction of such a measure in this Presidency. As an alternative, should this not meet with approval, he proposes, that a law should be introduced enforcing the complete isolation of every case of small-pox occurring in any community, and anticipates that such a rule would not only greatly limit the spread of the disease, but also cause the people to seek vaccination, with a view of escaping an attack of small-pox, and the consequent inconvenient isolation. The introduction and practical working of such a measure would, however, in my opinion, be attended with so many difficulties, that I cannot undertake its recommendation.

9. *Supplies of Vaccine Lymph.*—The lymph in use was of very good quality, but great difficulty was experienced in keeping up supplies. The majority of the people positively refused to permit lymph to be drawn from their children, so that arm-to-arm vaccination was frequently impossible. With a view of maintaining fresh supplies, Dr. Shortt passed lymph through the cow, but found this expensive and troublesome. It is worthy of note that he successfully vaccinated the horse, and with the lymph thus procured again produced the genuine vaccine vesicle in the human subject.

10. *Office Establishment of Superintendent-General.*—Dr. Shortt again alludes to the insufficiency of his office establishment, which was brought to notice in paragraph 9 of my letter, No. 234, dated 16th June 1869.

11. *Peons of Vaccine Establishment.*—The withdrawal of the peons formerly attached to the department seems to cause considerable inconvenience, and I would again take the liberty of respectfully bringing the subject to the notice of Government.

12. *Cost of the Vaccine Establishment.*—The estimated cost for the year was Rupees 84,988, but the net actual cost is said to have been Rupees 71,276-7-4.

13. Dr. Shortt has shown his usual energy and ability in carrying on his duties, and expects when the department is completed, and the staff more accustomed to their work, that the number of operations will be greatly increased.

I have the honour to be,

Sir,

Your most obedient servant,

W. MACKENZIE, M.D.,

Inspector-General, Indian Medical Dept.

FIFTH ANNUAL REPORT OF VACCINATION

IN THE

MADRAS PRESIDENCY,

FOR THE YEAR 1869.

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1. I have the honour, in submitting this Report, to state that the full sanctioned Establishment comprised—

1 Superintendent-General,
23 Superintendents,
100 First-class Vaccinators,
155 Second-class Vaccinators,
3 Peons, and
1 Sweeper.

2. The establishment has not been complete, as on the 1st January it was $17\frac{13}{51}$ per cent., and on the 31st December 1869 it was $9\frac{41}{51}$ per cent. below strength, giving an average of 2·9 per cent. below strength throughout the year under notice.

3. The incompleteness of the strength chiefly existed amongst the Vaccinators, owing to the difficulty of procuring candidates to fill up the vacancies arising from desertion, dismissal, resignation, and death. None were admitted who did not possess a knowledge of English, so as to be able to write their own Register and Returns. About 70 per cent. are able to do so now.

4. The distribution of the establishment has been fully stated in last year's Report, but the proportion of Vaccinators, in round numbers, to the estimated population was 1 to 40,909 in Madras, or 1 Vaccinator to every 2·45 square miles; and in the Districts, 1 to 91,568 individuals, or 1 Vaccinator to every 186 villages; and the proportion to area was 1 Vaccinator to every 505 square miles.

5. Of the twenty-three Superintendents, eight are from the class of Hospital Assistants, eight from the establishment of Vaccinators, and the other seven men were entertained for the purpose. Of the eight from among the Vaccinators, four have been confirmed in their appointments, and the remaining four are only officiating as such.

6. The following comprises the list of Superintendents in the Department on the 31st December 1869 :—

No.	Rank.	Names.	Districts.	Remarks.
1	Hospital Assistant	P. A. Mausillaw Pillay.	South Canara ...	
2	,,	M. Ramasawmy ...	South Arcot ...	
3	,,	Loganatha Permaldoss.	Madras Town ...	
4	,,	J. Ramiah	Coimbatore ...	
5	,,	P. Ramalingum ...	Cuddapah ...	
6	,,	C. Singaravaloo ...	Kistna ...	
7	,,	F. Chinnasawmy ...	Vizagapatam ...	
8	,,	Balasoondrum... ...	Jeypore ...	
9	Uncovenanted Civil Servant.	Goolam Mowlah ...	Madras District.	
10	,,	C. Seetharamiah ...	North Arcot ...	
11	,,	Meer Nuzzer Ally ...	Kurnool ...	
12	,,	Goolam Raza	Madras ...	
13	,,	C. Prasada Row ...	Ganjam ...	
14	,,	Sied Abdul Aziz ...	Salem ...	
15	,,	B. Puttaby	Bellary ...	
16	,,	C. Aroomoogum Chetty.	Tanjore ...	
17	,,	E. J. Good	Trichinopoly ...	
18	,,	O. Cundasawmy ...	Tinnevelly ...	
19	,,	Mr. A. Stewart ...	Nellore ...	
20	,,	K. Parthasaradi ...	Godavery ...	Officiating.
21	,,	G. Lutchmunuriah ...	Hill Tracts of Orissa ...	Do.
22	,,	M. Armoogum ...	Madura ...	Do.
23	,,	R. Chandoo	Malabar ...	Do.

7. The casualties among the Superintendents comprised two dismissals, one death, one resignation, and one removal. The one that resigned was an Hospital Assistant, whose conduct not proving satisfactory, he was allowed to rejoin the Medical Service. The one removed was also an Hospital Assistant, whose services were re-transferred to the Medical Department. Of the remaining two, one was a Vaccinator, who after thirty years' satisfactory service was appointed a Superintendent; but, on being convicted of falsifying Returns and sentenced to fine and imprisonment by one of the Magistrates of Madras, had to be dismissed from the service; and the other, for holding pecuniary transactions with his subordinates and other malpractices, was turned out of the department. Five Superintendents had to be fined for neglect of duty, &c., in sums varying from 5 to 20 rupees each.

8. The casualties among the Vaccinators comprised twenty-eight desertions, thirteen resignations, seventeen dismissals (three of these

resulting from criminal prosecution for falsifying accounts), and four deaths.

9. In 1868 there was only one casualty among the Superintendents, and sixty among the Vaccinators; in 1869 there have been five Superintendents and sixty-two Vaccinators, being four Superintendents and two Vaccinators in excess.

10. The Government having sanctioned the obtaining of a contract to serve for three years in the department, the necessary form was drawn up in consultation with the Government Solicitor, and brought into operation chiefly during the latter part of the year under notice, and no candidate can now enter without binding himself to serve for three years in the department, or refund one-half of the salary received by him in it. This rule has worked well: five Vaccinators refunded under its operations, on resigning the service, Rs. 203-0-9, seven Vaccinators who should have refunded deserted without doing so. It will be necessary that these individuals should be prosecuted for desertion as opportunities offer, so that this rule may have its full effect on others, and prevent desertion in future.

11. Every hope is held out to Vaccinators who may pass any of the Government examinations and work satisfactorily, of being made Superintendents as vacancies occur, and it is becoming apparent that before long a superior class of men will enter the department.

12. The present staff of Superintendents and Vaccinators consists of—

Superintendents.		*Vaccinators.*	
East Indians	2	East Indians	9
Hindus	13	Hindus	164
Mahomedans	4	Mahomedans	33
Native Christians	2	Native Christians	14
Brahmins	2	Brahmins	5
Total...	23		225

13. The duties of Superintendents and Vaccinators continue as arduous as ever, and must be so from their very nature to meet with success, resulting in constant itineration over the district owing to paucity of numbers.

14. Even if, as suggested by some, a Vaccinator be located in each of the talooks in the district singly, instead of working as at present in a body under the direct supervision of the Superintendent, it will become necessary that the Vaccinator should traverse 5,558 square miles in a year, the average area of a talook taken as a whole, or 463 square miles a month, which is morally impossible any man could do, when it is considered that the object of requiring a Vaccinator to reside in a talook is for the purpose of becoming acquainted with the

people. Leaving this point out of consideration, it will be necessary for a Vaccinator to remain at least a fortnight at each of the places he may go to, so as to establish vaccine lymph; and how is it possible for him to go over this ground, or have the time for making the acquaintance of the people? The smallest talook gives an area of 1,941 square miles, involving a monthly journey of 161 square miles, or weekly, that of forty square miles, and daily, over five, so as to traverse the talook, and under these circumstances, where is the time for establishing vaccine lymph, &c.?

15. Should the plan of locating a Vaccinator in each of the talooks be adopted, he will have to place himself in some central station, and will only work for a few miles around it; and as the Superintendent will be at some distance, having a party of Vaccinators scattered around him at distances extending over a hundred miles from each other, he can at best pay each Vaccinator but two or three visits in a year.

16. On the other hand, under the present system the staff works under his personal supervision, and if, as a body of strange men in a village, they frighten the women and children as is made out, the system possesses greater advantages in other respects: for the people, from seeing a body of well-dressed, respectable looking men come together, will in most instances readily give way; and when one or two cases are operated on, it acts as a charm, and others come in with their children to have them operated on; whereas, if the Vaccinators were alone, each would have to talk his breath out ere he got a single subject; vaccination might be admitted and appreciated, but the day was bad, or the child was not well, or some member of the family was absent, and therefore the child could not be operated on; or again some ceremonies are to be performed, and till then the operation must be put off, &c.

17. Even should they fail, their appearance as a body will make an impression on the people, so that the subject is fully discussed after their departure, and should the Vaccinators succeed in operating on one or two, the result is commented on, so that on the next occasion the Vaccinators visit the place, they are received with more grace, and in some instances succeed better; but in others, native-like, they cling to their stupid prejudices, crediting it for the occasion and admitting all that has been done, but will not come again; such are the majority of the people we have to deal with. Another advantage gained by our present system of vaccination is, that the operations are carried on at the doors of these rude inhabitants; for the most remote villages are visited, if not annually at least biennially; and thus many are penetrated, where vaccination had never been before, by this systematic itineration.

18. The work performed in the several districts is separately given in the following tabular form :—

Districts.	Total number vaccinated.	Per cent. of Success.	Value of each operation. RS. A. P.
Vaccine Depôt	4,472	95·281	0 6 8
Madras Town	5,484	88·183	0 5 11
Madras District	7,302	94·275	0 5 3
South Arcot	15,064	91·390	0 2 6
North Arcot	14,869	95·406	0 2 4
Tanjore	13,650	97·992	0 2 9
Trichinopoly	7,668	95·813	0 4 11
Madura	10,927	91·708	0 3 10
Tinnevelly	8,851	89·910	0 4 1
Godavery	9,603	84·692	0 3 8
Kistna	10,323	95·398	0 3 7
Ganjam	3,328	84·314	0 12 2
Vizagapatam	4,075	84·934	0 9 2
Kurnool	2,271	85·777	0 14 $7\frac{1}{3}$
Bellary	10,170	84·296	0 4 10
Cuddapah	3,596	91·129	0 9 4
Nellore	13,789	97·947	0 2 7
Coimbatore	13,515	87·865	0 3 3
Salem	9,685	90·583	0 6 1
Malabar	9,376	87·745	0 4 0
South Canara	8,888	96·399	0 4 8
Ganjam, Hill Tracts ...	2,632	84·234	0 13 6
Vizagapatam, Jeypore ...	2,539	92·004	1 3 7

19. This is the first year that the present form of district work has been carried out, and it is not fair to compare this result with that of the former year (1868); but now we shall have data to go by to show the results of each district for the future in a complete form, and shall be in a position to prove more satisfactorily than hitherto the progress which vaccination makes in each of the several districts.

20. On comparison, the numbers vaccinated in the past four years stand as follows :—

1865	1,91,394
1866	1,94,509
1867	2,70,749
1868	2,64,696
1869	2,55,685

Thus showing a decrease of 9,011 operations on the total during the year under review; but on analysing the numbers, the decrease is not in the Department Proper, but in that of the work outside it. Of the total given above, 1,98,051 were of the Department Proper, 12,090 by

the Municipalities, 28,066 by Zemindaries, 2,558 by Civil Dispensaries, and 10 by Railways.

21. Thus whilst the Department Proper shows an increase of 3,514 over that of the previous year, there is a decrease of 14,440 in the work of the Medical Subordinates, 85 in the Municipalities, 1,660 in the Civil Dispensaries, 148 in the Railway, while there is an increase of 3,808 in the Zemindaries, thus showing a total decrease of 12,525 operations from the collateral sources.

22. The sex and caste of the total operated on comprise the following :—

	Males.	Females.
Europeans and East Indians ...	1,003	... 691
Hindus	...1,24,428	... 1,00,725
Mahomedans	... 8,792	... 5,136

23. The Returns of Medical Subordinates give the following proportion of sexes : —

Males	... 11,173
Females	... 3,737

Thus showing a large preponderance of males over females who have been vaccinated during the year under review.

24. Whilst the exclusive total of the Vaccine Department for the year under review comprises—

Twenty-one Vaccine Districts	1,82,121
Vaccine Depôt and Town of Madras	9,956
Military Cantonments	4,417
Private Vaccinators	1,557
Total...	1,98,051

25. Thus on the whole, showing a total decrease of 9,011 operations below that of the previous year, which has been accounted for in paragraph 21 by the large decrease caused in the work of the Medical Subordinates, Municipalities, Civil Dispensaries, and Railway Department, reduced to 9,011 by the increase in the work of the Vaccine Department.

26. During the year the largest amount of work was performed in the District of South Arcot; North Arcot is next, and is followed by Nellore; while Kurnool as usual shows the smallest amount of work.

27. The staff of the department use every rational means in their power in advocating the cause of vaccination. The plan introduced last year, of sending out Vaccinators into the villages to explain in the form of a story the benefits of vaccination, has been carefully kept up, with decided advantage throughout the Presidency, at localities at which the Vaccinators are working.

28. As a rule the Superintendents are expected to visit every official of the district as a matter of policy, and their moral support and

countenance sought in spreading the benefits of vaccination more extensively.

29. During the year under notice the Vaccinators have been instructed during their itineration to leave in charge of the headman of the village a list of the names and particulars of every individual operated on in the village, and if these officials will only evince the interest they ought to in the work, they will be in a position to point out every vaccinated person in the place; and this plan will also act as a check on the Vaccinators, as to the correctness of their numbers, and keep the officials apprised of the work done in each district. Vernacular treatises are also circulated, and during the year under review 600 copies, of which 300 were an edition of my own treatise, and 300 of a pamphlet on vaccination by Dr. Pulneandy in Tamil, have been published by subscription raised in the Tinnevelly District, to which the Municipalities of Palamcottah and Tinnevelly contributed liberally, and were distributed not only there, but in other Tamil-speaking districts in the Presidency. Superintendents have been directed to raise subscriptions for this purpose, to publish treatises in other languages for distribution. The assistance of the Press is fully taken advantage of, both in the Presidency and in the mofussil, in advocating the advantages of vaccination.

30. It seems to me to be quite a mistake to substitute an inferior class of men as Superintendents on small salaries, in the place of the superior men who served in the department so well and faithfully. During the years 1865-66 and 1867 a Superintendent of Vaccination on 70 Rupees a month holds entire charge of vaccination in a district, and is, to a very great extent, independent of direct control; but he seems very little in the eyes of officials, owing to the smallness of his salary and the absence of an establishment; so that, he does not command that respect which is due to his position as head of the Vaccine Department in the district. His salary is barely sufficient to maintain him in a respectable position, and he is encumbered with supplies of stationery, records, prepared medicines, &c., for the use of his staff, for all of which he is obliged to make the best arrangement he can for carriage out of his small salary. He is denied the services of a peon; this is looked upon as the chief badge of authority by the people; and when they see a Superintendent without a peon, carrying his own letters to and from the Post Office, thus doing the work of a menial, they laugh at his pretensions and deride the department.

31. The Superintendents, finding their positions so independent of direct control, soon forget themselves, and make free with their subordinates; thus losing all self-respect, which the Vaccinators take advantage of, and misbehave themselves, either by their absence, insolence, or disobedience of orders, while the Superintendent, for-

getting his own want of prudence and self-respect, now grows overbearing, and treats his subordinates with the greatest harshness, and writes off letters or forwards telegrams to say that his staff has "mutinied," recommending the summary dismissal of some of the members, whilst the Vaccinators themselves combine as a body and submit charges against the Superintendent, and strike work. As the charges in one district are being investigated, another strike is heard on account of the disputes between the Superintendent and his staff. Thus mutual recrimination follows, and while some Superintendents are extremely harsh and overbearing, others are quite the contrary, are pusillanimous and timid in their dealings, and allow the Vaccinators to do as they like, lest the Vaccinators should combine and prefer charges against the Superintendent, and thus the staff guide the latter instead of Superintendents guiding their staff.

33. These Superintendents make no allowance for their own failings, while they are ever ready to find fault with their subordinates. Considering how these men are scattered over the Presidency, free of direct control, we need not be surprised to find them such ; for this is not the case with any one caste in particular, but is common to all. Much of my time was taken up in investigating charges against Superintendents and Vaccinators. False accounts of work had to be suppressed with a strong hand, and those detected in the practice were prosecuted with the utmost rigour of the law, to act as a deterrent on others. This system of falsifying returns existed chiefly among the old Vaccinators, who were well versed in the practice, and in one instance a promotion to a grade of Superintendent did not suppress the malpractice to which he had been accustomed as a Vaccinator.

34. The department has been pretty well purified of such worthless characters, and the example made of some of them, even at the expense of giving the department a bad name, has had a beneficial effect on the whole, and both Superintendents and Vaccinators are now fully alive to the results when detected in any malpractices as regards their work.

35. In the other Presidencies the Superintendents are Commissioned Officers in charge of Circles, and having under them a staff of Native Superintendents and Vaccinators, being thus able to supervise more efficiently the work of the Vaccinators; whereas, in this Presidency, the Superintendents are an inferior class of subordinates scattered over the whole Presidency, and they themselves require as much supervision as the Vaccinators. Owing to the great distances of the general districts, and in many instances as the facilities for travelling are not of the most rapid kind, with an inadequate office establishment, and a large amount of work to be got through, I have been unable to visit the whole of my Assistants during the year.

36. It would be necessary that the Superintendents should be more frequently visited at uncertain periods, and even if relieved of office work, it will be as much as can be expected of any man to visit and inspect the Superintendents and their 'staff' once a year. When the whole extent of the length and breadth of this Presidency is taken into consideration, it is really necessary, for the better success of vaccination, that a superior class of better-paid Superintendents should be appointed, or that the Presidency be divided into three or four divisions, each of which should be presided over by an Inspecting Officer, who should be required to inspect the Superintendents and Vaccinators of their divisions several times during the year, leaving the Superintendent-General to visit such districts and divisions in which vaccination is most backward, and attend to office work. Some such plan is urgently called for.

37. Those who complain of the results of vaccination not proving satisfactory, forget or overlook the two most important items connected with the work of vaccination, viz., *time* and the *distance*. Much time is lost in coaxing and getting the people to consent to have their children operated on, and to combat their prejudices, and give satisfactory answers to some of their very shrewd questions on the subject; also, from the manner in which the villages are scattered, it takes up much time to traverse the distance, and in begging about for subjects from house to house and village to village. The greatest difficulty the department experiences is in the inability to secure proper supplies of fresh vaccine lymph to conduct arm-to-arm operations. The people in the majority of instances positively refuse lymph to be extracted from their children, and the poor of the district, who hitherto, for a small consideration in the shape of batta, followed the Vaccinators in some districts, and allowed them to conduct arm-to-arm operations from subject lymph supplied by their children, now refuse to do so in consequence of the batta system having been put a stop to; but the time has arrived, I think, for the introduction of Legislative measures, not only to maintain the very life of vaccination in the supply of fresh vaccine lymph, but to overcome the apathy and determined obstruction of ignorance to the spread of vaccination throughout this Presidency.

38. I have attempted animal vaccination more than once, with the hope that in this way a larger supply of fresh vaccine lymph might be maintained; but find that this also is attended with expense, and as much, if not more, trouble than the batta system gives, from the want of that support and assistance which the heads and people of the different villages should render, and which is so very essential for its success.

39. I beg strongly to suggest that should any impediment exist to the introduction of compulsory vaccination, that advantage be taken of

the Contagious Diseases' Act, and orders be issued at once, and the same enforced as suggested by the Superintendent of Vaccination, Cuddapah District, for the isolation of cases of small-pox when they occur in any part of the Presidency, so as to prevent the spread of the disease; and when people see the inconvenience resulting from such a measure, they will at once have recourse to vaccination, with the view of avoiding the disease. I believe that this might at once be carried out, should Government be pleased to approve of the same, thus effecting much good, and arresting the spread of small-pox in this Presidency.

40. The inoculation of small-pox will also require suppression; but I believe that the isolation of cases that occur of natural small-pox or artificial small-pox, the result of small-pox inoculation, as suggested above, be insisted on, will give the death-blow to its operation; and, in my humble opinion, this measure is imperatively called for, and I respectfully request that the Inspector-General, Indian Medical Department, may be pleased to urge the subject on the attention of Government.

41. It will be seen from the Extracts given from the Reports of my Assistants, that they almost unanimously asked for the services of a peon; these are urgently called for, and the sanction of a peon on the usual salary is, in the long run, a saving to Government than otherwise. I have fully urged this subject in my last year's Report, to which I beg to refer.

42. I shall now review the Reports of my Assistants, the Superintendents of Vaccination in the several Districts, during the year under notice. The Districts have been alphabetically arranged:—

1.—BELLARY DISTRICT.

The Superintendent reports a total of 10,170 operations, comprising 5,506 males, and 4,664 females, inclusive of 3,542 subjects of both sexes under one year of age, with a per-centage of 84·296 of success; but on comparison with the work of the previous year (1868), a decrease of 2,154 operations is found to exist, with a per-centage of 12·414 below that of the previous year. The cost of each operation was Rupees 0-4-10. The decrease in the number of operations the Superintendent accounts for by the presence of much sickness, chiefly fevers, from which nearly all of his staff have suffered; and the decrease in the per-centage of success was occasioned by the large use of glass lymph during the year, from the very great difficulty experienced in obtaining vaccine lymph from the subject direct to conduct arm-to-arm operations. I have had no trouble whatever with the staff of this district, as the Superintendent seems to have managed them with great tact and in a very creditable manner during the year under review.

2.—COIMBATORE DISTRICT.

The Superintendent reports 13,515 operations, comprising 6,893 males and 6,622 females, inclusive of 3,147 subjects of both sexes under one year of age, yielding a success of 87·865 per cent.; but on comparison with the work of the previous year, a decrease of 4,695 operations, with a per-centage of 2·782 below that of the previous year, becomes apparent. This great decrease was occasioned chiefly from the incompleteness of the number on the staff of Vaccinators, and the time it takes to train recruits ere they settle down to work: the per-centage of success arises from the use of glass lymph. The cost of each operation was Rupees 0-3-3.

I visited the Superintendent and staff in the village of Bhowany on the 24th February, and spent several days in visiting some of the adjacent villages, to inspect the work and equipments of the staff, &c.; from thence I proceeded to the Burgoor Hills, accompanied by a Vaccinator, with the view of establishing vaccination; having done which I left the Vaccinator at work, and returned to the Superintendent and staff, and eventually left the district on the 9th March 1869 for Malabar.

In consequence of a telegram from the Superintendent, that the whole staff of Vaccinators had combined and struck work, refusing to attend to the orders of the Superintendent, I left Madras on the 6th and joined the Superintendent, at the Watakallee Station, on the 7th December; and after investigating the case, three Vaccinators were reduced from the 1st to the 2nd-class, one was reprimanded, and the others, with one exception, were fined in sums varying from 1 to 5 rupees each. The work had been at a stand-still for a time; the degraded Vaccinators resigned their appointments; and two other 2nd-class Vaccinators had to be removed to another district, and it took some time before suitable candidates could be selected to fill the places. These causes sufficiently account for the large decrease shown in the Return of the district.

3.—CUDDAPAH DISTRICT.

The Superintendent reports 3,596 as the total number of operations performed during the year, comprising 1,994 males and 1,602 females, inclusive of 220 children of both sexes under one year of age, giving a per-centage of 91·129 of success, thus showing a decrease of 1,973 operations below that of 1868, with an increase in the per-centage of success by 8·65. The cost of each operation was Rupees 0-9-4. The decrease is satisfactorily accounted for from the fact of a larger number of men (fourteen) having worked for

the first six months of 1868 under the old rule, and the average for the year 1869 has been under eight Vaccinators. The Superintendent has managed his staff well, and they have given no trouble whatever. Some changes were necessary among the Vaccinators. There has been much sickness among the staff, which has also interfered with the work of vaccination. In this district great opposition is offered to vaccination by the people generally. The Superintendent gives an interesting account of the equivocation of both officials and the people. The practice of inoculation exists, and this is the cause of small-pox prevailing for the greater part of the year, whilst the people themselves give evidence to having suffered from this scourge. I would draw attention to the conduct of the Munsiff of Yerragoontla as given in the Superintendent's Report, who seems to have set not only to the other officials, but to the people themselves an excellent example, and if we could find a few more such, there would be no fear as to the rapid spread of vaccination, and suggests the removal and isolation of the people suffering from small-pox, which he believes will have a good effect in causing the people to resort more largely to vaccination, and I quite agree with him, and think that this suggestion deserves the consideration of Government.

4.—GANJAM DISTRICT.

The Superintendent reports 3,328 operations as the total for the year, comprising 1,913 males and 1,415 females, inclusive of 214 children under one year of age of both sexes, with a per-centage of success of 84·314. On reference to the previous year's Report an increase of 2,082 operations is exhibited by the return, and an increase of 5·221 in the per-centage of success. The average cost of each operation is Rupees 0-12-2. I regret to have to observe that vaccination is very backward in this district, and, as the Superintendent points out, in his report, that although its advantages are, to a certain extent, known and appreciated, yet, great apathy is shown with a passive and determined resistance to the propagation of vaccination. I have had no trouble with the staff of this district, although some indication of a disagreement between the Superintendent and staff is beginning to crop up at the close of the year.

Hill Tracts of Orissa.

The Superintendent reports 2,632 operations, comprising 1,720 males and 912 females, inclusive of 117 children under one year of age of both sexes, with a per-centage of 84·234 of success. The average cost of each operation was Rupees 0-13-6. The great bugbear of this tract is the fever, and the Natives dread entering the

interior of these districts. The working party consists of six 1st-class Vaccinators, who, during the field season, draw double batta, notwithstanding which, they dread the very idea of entering particular parts of the district. Still, under effective supervision, the work progresses more satisfactorily than could be expected. The practice of small-pox inoculation prevails largely throughout the Hill Tracts.

5.—GODAVERY DISTRICT.

The Superintendent reports 9,603 operations during the year, consisting of 5,125 males and 4,478 females, inclusive of 453 children of both sexes under one year of age, and the reported per-centage of success is 84·692.

On comparison with the previous year's work there is a decrease of 4,983 operations, while the per-centage of success is greater by 2·626, and the cost of each operation is Rupees 0-3-8.

The decrease is accounted for from the increased number of Vaccinators (21) having worked during the early part of 1868, whilst during 1869 the strength was only eleven. Still, even this number was never complete, owing to changes resulting from removals, desertions, &c. The Superintendent is an intelligent young man, who served previously in the department as a Vaccinator, and he brings his former personal experience to bear efficiently on his present work of superintendence. The main difficulty to be contended with in this, as in other districts, is the inability to secure supplies of fresh vaccine lymph, as the people are obstinate, and refuse to allow vaccine lymph to be taken from their children.

6.—KISTNA DISTRICT.

The Superintendent reports 10,323 operations as the result of his work for the year, comprising 5,406 males and 4,917 females, including 1,422 children of both sexes under one year, with a per-centage of 95·398 of success, thus giving a small increase of 36, and a per-centage of 7·321 of success over that of the previous year. The cost of each operation was Rupees 0-3-7. The Superintendent and staff of the district have been working satisfactorily and cordially, so that I have had no trouble with them. The practice of small-pox inoculation prevails largely in this district. The Superintendent reports having inspected a large number of those who had been inoculated, and that one death had occurred, and that twenty others were in a very precarious state at the time of the Superintendent's inspection. Owing to this practice,

small-pox is constantly showing itself, and the Vaccinators have been scattered in consequence of calls from the District Officials for their services, during the prevalence of such epidemics. There has been a good deal of sickness among the staff from fever and dysentery during the year under report.

7.—KURNOOL DISTRICT.

The Superintendent reports 2,271 operations, comprising 1,344 males and 927 females, inclusive of 343 children of both sexes under one year of age, with a per-centage of success of 85·777, at a cost of Rupees 0-14-7⅓ each; and on a reference to the previous year there is an increase of 1,457 operations and 3·759 in the per-centage of success. I regret to have to observe that this is the most backward district in the whole Presidency as regards vaccination: any attempts to explain or argue with the people results in the use of abusive and obscene language towards the Vaccinators, nor do they hesitate to insult them in their attempts to operate on the unprotected. There have been several cases of assault on the staff, and in six instances the assaulters were successfully prosecuted before the Magistrate, convicted, and punished; evidence cannot be procured to bring home the charge in every instance, nor do I approve of such prosecutions except in exceptional instances. I would refer to the Superintendent's Report for a fuller account of the obstructions to the progress of vaccination. The district has, invariably, yielded the smallest number of operations, notwithstanding every exertion on the part of the Superintendent and staff, and the exertions of the officials of the district, some of whom have rendered cordial assistance in the spread of vaccination. Eight annas only were paid during the year as batta to mothers for supplying vaccine lymph.

8.—MADRAS DISTRICT.

The Superintendent reports 7,302 operations, including 4,008 males and 3,294 females, including 795 children of both sexes under one year of age, with a per-centage of success of 94·275; and on comparison with the work of the previous year, a large increase of 5,568 operations, with a per-centage of 4·221 of success, is apparent. The money cost of each operation was Rupees 0-5-3. Even in this district, which adjoins and encircles the Presidency, much prejudice exists, chiefly arising from apathy and ignorance among the people; and during the prevalence of small-pox, which was introduced from districts where small-pox inoculation prevails by itinerating gangs of *Coravers* and other tribes,

the people positively refuse to receive vaccination to suppress the disease by operating on the unprotected. In some parts of this district vaccination is readily and freely accepted by the people; these parts form exceptions to the rule. The Superintendent gives two instances, in which, during the prevalence of small-pox, vaccinating the unprotected tended to suppress the plague. On Thursday the 11th November I joined the Superintendent and staff at Kalingamodoo (Red Hills), and arranged for work the next morning; but, owing to rain, neither the Superintendent nor the staff put in an appearance, as his head-quarters was some distance away from my camp. On the 13th the Superintendent appeared with three excellent eighth day lymph subjects. I immediately went out with five of the staff to a cooly camp in the vicinity, and witnessed the staff operate on fifteen subjects; the other Vaccinators had not come in from their working stations. I inspected the equipments of the staff and the records of the Superintendent. I found much fault with the latter on the state of his records and his work generally; I reprimanded him and directed him to meet me again on my return from the Nellore District, which he did on the 27th November, and having instructed him what to do, I left for Madras. Rupees 13-10-6 were paid as batta in this district to mothers for supplying vaccine lymph during the year under notice.

a.—Madras Town.

I have had a great deal of trouble with the Superintendent and Vaccinators of the town. The former was detected in falsifying the returns of a Vaccinator after having given him leave and sent him away to his native village. Both Superintendent and Vaccinator were prosecuted before a Magistrate, convicted, and sentenced to fine and imprisonment, on account of which the work was at a stand for some time, and during the investigation it was made clear that other Vaccinators had been guilty of absence with the connivance of the Superintendent, but the charges could not be brought home, as the whole staff was contaminated. One Vaccinator was dismissed for giving prevaricating evidence before the Magistrate, and the remainder were transferred to other districts, and a fresh batch from the mofussil was appointed to take their place. It required a little time for these to settle down to work, and from these several causes there has been a large decrease of 5,656 operations during the year, with a per-centage of success of 88·183, while the actual number of operations was 5,484. Of this, 3,103 were males, 2,381 females, inclusive of 1,079 children of both sexes under one year of age. The cost of each operation was Rupees 0-5-11. The batta paid to mothers for fresh vaccine lymph was Rupees 9-5-0.

b.—Vaccine Depôt, Madras.

At this institution also there is a decrease of 468 operations, caused chiefly by the misconduct of the Superintendent already adverted to in connexion with the Town of Madras ; and owing to the cessation of small-pox in Madras, people were not so eager as in the previous year to get vaccinated. The number of operations during the year under notice was 4,472, inclusive of 1,475 males, 2,097 females, and 798 children of both sexes under one year of age, with a per-centage of success of 95·281. The daily average of fresh operations was 13·2, whilst those under treatment constituted 43·5 persons. 1,326 Mercalls and 8 Seers of rice, at a cost of 1,759 rupees 9 annas and 8 pice were expended on account of the subjects vaccinated. Each operation cost Rupees 0-6-8. 199 capillary tubes, eighty glass-plates, and thirty-nine ivory points charged with fresh vaccine lymph were sent out to various parts of the Presidency, in addition to eighty-nine subjects sent to St. Thomas's Mount and Palaveram to Medical Officers to supply fresh lymph for arm-to-arm operations, and 422 Vaccine Certificates to candidates going up to the different examinations were given at this institution. When in this Presidency I visit it weekly.

9.—MADURA DISTRICT.

In this district the Superintendent reports 10,927 operations, inclusive of 6,041 males, 4,886 females, and 2,486 children of both sexes under one year of age, with a per-centage of 91·708 of success, and at a money cost of Rupees 0-3-10 each operation. On comparison with the work of the previous year, an increase of 620 operations becomes apparent, with a decrease of 4·690 in the per-centage of success. I have had trouble with the Superintendent and staff of this district ; there had been much quarrelling between the Superintendent and staff, and after personal investigation, the former was fined and removed from this district to Tinnevelly, and several of the Vaccinators were reprimanded. A Vaccinator from the South Arcot District was appointed to officiate as Superintendent, and he is discharging his duties satisfactorily. Here also obstructions to the spread of vaccination exist in many parts of the district, and the staff is working quietly and patiently to overcome the opposition. The two Vaccinators, employed especially to work on the Pulney Hills, show a total of 884 operations ; this is included in the total given of the district. Here also much opposition exists to the spread of vaccination, which the staff is endeavouring to overcome.

10.—MALABAR DISTRICT.

The Superintendent reports 9,376 operations, comprising 7,586 males and 1,790 females, including 109 children of both sexes under one year of age, with a per-centage of 87·745 of success; and on a reference to the previous year's Report there is a large decrease of 7,962 operations and a per-centage of 1·69 below that of the previous year, owing to the non-completion of the staff, and misconduct of the Superintendent. The money cost of each operation was 4 annas.

On the 9th April I arrived at Calicut, but found that the Superintendent and staff were at Tellicherry, whither I followed and met the Superintendent, who had his staff scattered; but, as a few of the Vaccinators were at work at Cannanore, I directed the Superintendent to proceed thither, while I followed him; and on the morning of the 13th April the Superintendent with two Vaccinators met me. I went out with them, examined the vaccine lymph in use, and having told the Superintendent what to do, I proceeded to the South Canara District, directing the Superintendent and Vaccinators to meet me on my return to Cannanore. I came back on the 2nd of April, when the Superintendent was on the sick report, and I could get no satisfactory account of his doings since I had last seen him; on the 3rd I inspected the Vaccinators and their equipments; on the 4th I went to town and inspected the vaccine lymph in use, and had several subjects operated on in my presence. I left the district on the 11th April. I had every reason to suspect that the habits of the Superintendent were irregular, but could obtain no positive information; and for nearly three months no accounts were to be had of the Superintendent, his whereabouts or his doings, so that I had to suspend him, and sent a 1st-class Vaccinator to relieve him; and, as the Superintendent could give no satisfactory account of himself, he was dismissed, and a Vaccinator of the district, a native of the place, was appointed to officiate as Superintendent. The improper habits and neglect of work of the Superintendent accounts for the large decrease of operations. The present Officiating Superintendent discharges his duties tolerably well. Very great objections are raised against vaccination here, and from the scattered manner in which the houses are built, much time is lost in the search and subsequent coaxing arguments, &c., that follow ere a subject can be secured for operation. Eleven annas only were paid to mothers of children for supplying fresh vaccine lymph during the year under notice.

11.—NELLORE DISTRICT.

The Superintendent of this district reports 13,789 operations, including 7,418 males, 6,371 females; and 698 children under one year of

age, with a per-centage of success of 97·947. The money cost of each operation is 2 annas 7 pice; and on comparison with that of the previous year, a large increase of 10,670 operations and a per-centage of 2·903 is shown, owing chiefly to the exertions of the present Superintendent who served previously in the department as a Vaccinator, and he has brought a practical knowledge of three years' duration to bear on his duties as Superintendent with great success. The Superintendent of this district, an Hospital Assistant, died of fever contracted in the discharge of his duties on the 7th April, and another Hospital Assistant, who had succeeded him, was allowed to resign his appointment, and he was succeeded by the present Superintendent. I have had no trouble whatever with this last individual and his staff during the year; they appear to work unanimously together. I entered this district on the 17th November, and proceeded to Dugurajapatam where the Superintendent had his head-quarters, and was exposed to much inclement weather from excessive rain; but, on my arrival there, I found that the Superintendent had completed the work in those parts, and proceeded to Vencatachellum's Chuttrum, fifty miles further and nine miles from Nellore; thither I followed and joined him on the 20th November, and after inspecting the vaccine lymph in use and the equipments of the staff I went into Nellore the next evening to see the Collector and Zillah Surgeon; and on the night of the 23rd I re-joined the Superintendent and staff at the same Chuttrum. The next morning I went five miles distant to inspect the lymph in several villages and see the staff operate; seventy-six subjects were vaccinated in my presence; and I returned to camp and left the district on the 26th for Madras. No batta was given in this district to mothers to furnish fresh vaccine lymph.

12.—NORTH ARCOT DISTRICT.

The Superintendent reports 14,869 operations, comprising 8,634 males, 6,235 females, inclusive of 2,720 children of both sexes under one year of age, with a per-centage of success of 95·406. The return shows a large increase of 6,477 operations and 2·337 in the per-centage of success, at a cost of 2 annas 4 pice each operation. I have not had much trouble with this staff: the Superintendent was removed from the district in the early part of the year, as I had doubts of his conduct in the prosecution of a Vaccinator for defaming him, and although he succeeded in getting the Vaccinator convicted, there was ample evidence of improper conduct on his part which could not be brought home; and the present individual who succeeded him has been giving satisfaction. I joined the Superintendent and staff at Arcot on the 4th August; on the 5th I inspected the records of the Superintendent and three subjects with

the seventh day vaccine vesicles; these were well formed and genuine. On the 6th I went out with the Superintendent and staff and witnessed forty operations, and during the forenoon the Vaccinators and their equipments were inspected, and the Superintendent was examined on the principle and practice of vaccination. On the 7th I went out into the bazaars accompanied by the Superintendent and staff, and witnessed eighteen operations, and left the same evening for Madras. 23 rupees 2 annas and 4 pice were paid as batta to mothers for supplying fresh lymph for arm-to-arm operations.

13.—SALEM DISTRICT.

In this district the Superintendent reports 9,685 operations which were carried on 5,151 males, 4,534 females, and 2,175 children under one year of age, with a per-centage of 90·583 of success; but on reference to last year's Report a large decrease of 7,386 operations and 3·533 in the per-centage of success becomes apparent. The value of each case vaccinated was Rupees 0-6-1. The decrease in the staff of Vaccinators, in a measure, accounts for this; and the conduct of the Superintendent also was not satisfactory: he was fined and removed from the district. It should also be stated that a larger amount of work was done under the old rules in the early part of the previous year by fourteen Vaccinators. I joined the staff of this district at Sunkerydroog on the 19th February; on the 22nd I accompanied the Superintendent and staff and visited several villages and travelled a distance of fifteen miles, inspecting work from village to village and from house to house, till I reached Comarapallium, a village in which the Superintendent had his head-quarters established. I found the vaccine lymph good, but many of the vesicles in most of the subjects were broken. On the 23rd I inspected the records and equipments of the staff, and questioned the Superintendent on the practice and principles of vaccination. On the 24th I went into the village itself with the staff and saw them operate in my presence on several cases. On the 25th we visited a village some distance of three miles from us, and had a number of fresh cases operated on in my presence, and then left for the adjoining District of Coimbatore, and returned again on the 7th March; again inspected the work of the staff at Comarapallium, and finally left the district for Malabar the same evening.

14.—SOUTH ARCOT DISTRICT.

The Superintendent reports 15,064 operations among 8,133 males, 6,931 females, and 1,013 children under one year of age, with a percentage of success of 91·390, showing a large increase of 8,889 operations

and 4·389 per-centage of success over that of the previous year. The cost of each operation was Rupees 0-2-6. No batta was given to mothers for furnishing lymph. I have had no trouble whatever with this district; the Superintendent and staff have not only worked harmoniously, but have shown good work. Two Vaccinators from this staff have, on the recommendation of the Superintendent, been appointed to officiate as Superintendents in other districts. The practice of small-pox inoculation continues to prevail, and I would refer to the Superintendent's report to his plan of operations in this district.

15.—SOUTH CANARA DISTRICT.

The Superintendent reports 8,888 operations among 5,343 males and 3,545 females, including 198 children under one year of age, with a per-centage of success of 96·399; and on comparison with the work of the past year there is a large increase of 5,157 operations, with a per-centage of 3·378 over that of the previous year. The money value of each operation was 4 annas 8 pice, and 4 rupees 1 anna and 6 pice were paid as batta to mothers for supplying vaccine lymph. I entered the South Canara District on the 15th March, and travelled up to Mangalore, ascertaining, as I passed through the several villages, what progress vaccination had made in the district. Among the Moplah population, and from the marks on the men's arms there is evidence that nearly fifty per cent. of the population are protected by vaccination. The Superintendent and staff joined me at Mangalore on the 22nd March. The same forenoon I inspected the records of the Superintendent and questioned him on the principles and practice of vaccination. On the 23rd I inspected the staff and their equipments and saw the Collector on the subject of vaccination. On the evening of the 24th I left Mangalore for Ferringeepett, where, on the morning of the 25th, the Superintendent and staff joined me, and we went into the village. I examined the lymph in use and had forty-eight subjects operated on. I left the staff at work here and finally departed from the district on the 1st of April. Not long after my visit, charges were preferred against the Superintendent by a couple of Vaccinators for improper conduct. The matter was referred to the Magistrate of the District for investigation, and before this was concluded another charge was forwarded by the Officer Commanding the 14th Regiment N. I. against the Superintendent for harbouring a Sepoy of the Regiment in his house and conniving at his absence with full knowledge of the facts. On this the Superintendent was removed out of the department, and his place has been taken up by an Hospital Assistant.

16.—TANJORE DISTRICT.

The Superintendent reports 13,650 operations on 7,115 males, 6,535 females, and 1,754 children under one year of age, with a per-centage of 97·992 of success; and on a comparison with the work of the previous year there is a large decrease of 8,095 operations with an increase of 7·972 in the per-centage of success. The cost of each operation was 2 annas 9 pice. The decrease is accounted for from the fact that twenty-one Vaccinators worked in the first part of 1868 under the old rules, whilst there were only fifteen in 1869, and changes in the staff, resulting from promotion and change of station, satisfactorily accounts for the same. On the 25th September I arrived at Tanjore, and on the 27th the Superintendent with his staff and records joined me. The records of the Superintendent and the equipments of the staff were examined by me and found good. The Superintendent was questioned on the principles and practice of vaccination, and as the weather was wet and raining, I was unable to go out and see the Vaccinators work, and I left the district on the 28th. I have never had any trouble with the staff of this district. They continue to work well and harmoniously together.

17.—TINNEVELLY DISTRICT.

The Superintendent reports 8,851 operations on 4,847 males, 4,004 females, and 1,351 children under one year of age, with a per-centage of success of 89·910. The returns show a small increase of 1,371 operations with a decrease in the per-centage of success of 4·850, accounted for from the use of preserved lymph. The money value of each case was Rupees 0-4-1. Nine rupees were expended in paying batta to mothers for supplying fresh lymph. There has been much quarrelling between the Superintendent and Vaccinators; petitions and counter-petitions were received at this office. On the receipt of these I started for Tinnevelly, and arrived there on the 31st August, and inspected the records of the Superintendent and the equipment of the Vaccinators the same day, and was engaged in the investigation of the complaint between the Superintendent and Vaccinators. The former prosecuted a Vaccinator successfully to conviction for deserting his post, and had him fined and imprisoned. On this the other Vaccinators combined and resisted orders, when the Superintendent was convicted and fined 20 rupees by the Magistrate for assaulting one of the Vaccinators. I found on examination that the habits of the Superintendent were bad, and that he was guilty of improper practices and in holding pecuniary transactions with the Vaccinators. On this he was suspended with several of the Vaccinators, and on the 2nd September I left for Courtallum to see the Collector and to advise with him on the subject. I then returned

to Tinnevelly on the 8th April, and after further investigation the Superintendent and three of the 2nd-class Vaccinators were dismissed the service, and five other Vaccinators were removed from the district. I examined the vaccine lymph in use, and left a 1st-class Vaccinator in charge of the records under the orders of the Zillah Surgeon, pending the arrival of the Superintendent removed from the Madura District to take the place of the man that was dismissed. I left the Tinnevelly District for Madura on the 11th September. Small-pox inoculation is prevalent in this district also.

18.—TRICHINOPOLY DISTRICT.

The Superintendent reports 7,668 operations, comprising 3,996 males, 3,672 females, and 1,224 children of both sexes under one year of age, with a per-centage of 95·813 of success. On comparison with the work of the previous year an increase of 5,282 operations is shown with a decrease of 3·744 in the per-centage of success. The cost of each operation was Rupees 0-4-11. No batta was given to mothers for supplying vaccine lymph. I have had no trouble whatever with the staff of this district. I was at Trichinopoly on the 24th September, and having instructed the Superintendent to meet me in the district, I went to Tanjore on the 28th; the Superintendent met me at the station of Trevembore, about ten miles from Trichinopoly, where I inspected the records of the Superintendent and the equipments of the staff, and by an oversight no vaccine lymph was in readiness for inspection, and the weather proving wet, I was unable to go out and see the staff work. Accompanied by the Superintendent and staff I went into Trichinopoly, and eventually left the station on the 1st October.

19.—VIZAGAPATAM DISTRICT.

The Superintendent reports 4,075 operations on 2,045 males and 2,030 females, including 580 children of both sexes under one year of age, with a per-centage of 84·934 of success, at a cost per operation of Rupees 0-9-2. Batta, to the amount of Rupees 3-14-0, was given to the mothers of children for supplying fresh lymph. On a reference to previous returns there is an increase of 3,043 operations and 17·881 in the per-centage of success. A change of superintendence has taken place during the year. On the whole, I have had no trouble with the staff; they have been working steadily midst much determined opposition. The Superintendent reports having derived much assistance from H. Sewell, Esquire, the Principal Assistant Collector, and from the Native Officials also. Unfortunately for vaccination, deaths from any cause

whatever, and at any period after vaccination are attributed to it by the people here. The Superintendent reports two instances of the kind, but, as he is an Hospital Assistant, he is in a position to recognize the actual disease and cause of death; but it is hard to convince the rude and ignorant villagers of the fact.

c.—Zemindary Tracts of this District.

The Superintendent reports 2,539 operations among 1,265 males, 1,274 females, and 182 children of both sexes under one year of age, at a cost per operation of Rupees 1-3-7, and with a per-centage of 92·04 of success. The work is arduous and attended with much travelling in sickly localities; both Superintendent and staff have suffered from the fever of the district, notwithstanding which they have been working satisfactorily. The practice of small-pox inoculation prevails largely in these tracts, and it is difficult for vaccination to contend with it, as the people are not amenable to reason, and prefer to adhere to their own pernicious habits, without, for a moment, weighing the merits of the question; thus accounting for the prevalence of small-pox more or less throughout these tracts. On a reference to the previous year's Report there is an increase of 2,085 operations with a decrease in per-centage of 1·606 of success. I have had no trouble whatever with the staff, and the Superintendent is a good hardworking man, but the Native Officials do not give the necessary moral support to enable them to overcome the prejudices of the people.

42. From the general review of the work of vaccination in the Presidency, it will be seen that, on the whole, the work is satisfactory as far as it goes. An increase of 3,514 operations is shown by the work of the department, and I am confident that, as the work settles and the department is completed, that it will improve greatly, and a much larger increase may be looked for next year.

43. The estimate of the cost of the whole establishment has been Rupees 84,988.

The actual cost of the year, Rupees 72,491-8-7.

Recovered by fines from Superintendents, Rupees 65.

Recovered by fines from Vaccinators, Rupees 750-13-7.

Amount refunded on resignation of Vccinators, Rupees 311-0-2.

Contingent expenses, Rupees 88-3-7.

Net cost of the establishment, deducting the above, Rs. 71,276-7-4.

44. The amount of batta has been considerably restricted. No batta has been given in six districts, and in the remaining nine Rupees 119-4-4 were given to mothers for supplying fresh vaccine lymph. Tho largest sum paid was in the North Arcot District, viz., Rupees 23-2-4.

45. The practice of giving batta has a double advantage that nothing else can compensate us for in the work: for when preserved, or

glass lymph is exhibited to the people, they are suspicious and hesitate ere getting vaccinated; when a living child is shown, and they see no harm arise to the child, but that only a few vesicles are raised at the insertions, it convinces them of the advantages of vaccination, and at the same time the operation is perfectly successful; while in the majority of cases there are failures when glass lymph is used, and while some lose confidence, and do not like to submit their children to the operation a second time; others believe that the operation is sufficient, and that it does not require a repetition without reference to result, and when the child subsequently takes small-pox, vaccination is condemned and pronounced worthless.

46. 34,747 children under one year of age were vaccinated during the year under notice, and we make every exertion in our power to operate on young children, but in many instances it is difficult to overcome the prejudice of mothers, and this exists not only among Natives, but also among East Indians and Europeans.

47. I submit copious Extracts from the Reports of my Assistants: most of them are interesting, and they show the view taken by Brahmins, Hindus, Mahomedans, Native Christians, and East Indians after an experience of eighteen months by some, and others extending over years in the department. Their opportunities of becoming acquainted with the people exceed that of many other departments under Government, for they constantly come in contact with not only the men, but also with the women and children of the villages, and thus they are in a position to give their views. All of whom suggest that vaccination should be compulsory, and, as experience has already shown, the Natives, as a body, are not yet in a position to take advantage of any boon, however great, voluntarily, but when enforced on them, they appreciate and even acknowledge the benefit of the measure subsequently; and, as the Kurnool Superintendent characteristically terms it, they are like children requiring the parental authority of Government to enforce remedies when called for.

48. The thanks of this department are due to most of the European and Native Officials of the several districts for much cordial co-operation and assistance in our work; at the same time it must be admitted that much more can be done by our Native friends: one example by an official of a village acts as a charm and opens the hearts of the whole village to vaccination, and this is what we need most sadly, than all the false preaching they sometimes give vent to in our presence; at the same time, the juvenile members of their own family are secreted in some secluded part of their dwellings.

49. Material assistance was received from the Vaccinators of the several Municipalities, Zemindaries, &c., but not what it should be:

there has been much falling away in the work of these Vaccinators during the year; but I am hopeful that during the current year better results will be attained.

50. It should be borne in mind that the work of a Municipality is limited to the boundaries of the place, which, at best is not great, and the assistance derived from Municipal Vaccinators is limited. From the Vaccinators having a fixed habitation, and working within a limited area, and among the people of towns who should be better enlightened than the inhabitants of rural districts, the work should be proportionately large. Twenty Vaccinators were employed by the several Municipalities during the year under review, and a small decrease of eighty-five is shown in their returns.

51. Sixty-nine Zemindary Vaccinators have been employed by the different landed proprietors in this Presidency in the Vizagapatam and Ganjam Districts; their work is supervised by special Superintendents. A large increase of 3,808 operations is shown in the Zemindary work.

52. I have fully entered into the inadequacy of my office establishment, and have given full particulars in my last Report on this subject, that it is unnecessary for me to say anything further, beyond that of alluding to the subject in this report.

52. I regret that I have not had time to conduct my experiments on vaccination beyond that of passing the vaccine lymph through the cow, and I have successfully vaccinated the horse and re-transferred the vaccine disease to the human subject. The horse seems just as susceptible to vaccination as any of the other domestic animals I have experimented on.

53. In conclusion, I beg to tender my thanks to the Press in general for their assistance and co-operation in spreading the benefits of vaccination.

MILITARY CANTONMENTS.

The three Military Cantonments in which Vaccinators are located by this department are Bangalore, Secunderabad, and Kamptee.

1.—Bangalore.

Two Vaccinators have worked in this cantonment during the year under notice, with some interruptions resulting in the removal and posting of Vaccinators. The total number of operations performed was 1,506, of which 1,436 were successful, and 70 unsuccessful. The percentage of success was 95·35.

The number operated upon under one year of age was 403.

The caste and sex of the parties operated on is given below:—

	Males.	Females.
Europeans and East Indians	50	46
Hindus	564	412
Mahomedans	258	176
Total...	872	634

No money was paid for batta. The work of the Vaccinators in this cantonment is under the supervision of the Superintendent of Vaccination of the Salem District. A large decrease of 2,268 operations is shown from the returns, which is accounted for by the frequent removal of Vaccinators for misconduct; it is so hard to trust these men to work by themselves, and effective supervision is imperatively called for. I visited Bangalore on the 9th February and 16th October, spending three days on each occasion with the Vaccinators, in going out into the bazaars and examining their work. I had much fault to find, resulting in the punishment and removals of Vaccinators from the station, and appointing others to take their places. The Superintendent in charge of the cantonment visited the station twice during the year in the months of April and December, and on each occasion spent a few days with the Vaccinators; this, however, does not seem to suffice, and more frequent inspections are called for.

2.—Secunderabad.

Two Vaccinators have worked throughout the year in this cantonment, and, at the suggestion of the Deputy Inspector-General of Hospitals, a change was made in the staff by the substitution of a 1st-class for a 2nd-class Vaccinator in October last, so that the work is now carried on by a 1st and a 2nd-class Vaccinators. They work under the orders of the Medical Officer in medical charge of the Civil Dispensary at that station. 2,274 operations are reported, of this number 1,614 were successful and 664 unsuccessful: 474 children under one year of age have been operated on. The per-centage of success is 70·975. On comparison with the work of the previous year, a small increase of 352 operations is shown. The following are the proportions of caste and sex:—

	Males.	Females.
Europeans and East Indians	114	54
Hindus	1,207	660
Mahomedans	145	94
Total...	1,466	808

3.—Kamptee.

In this cantonment a 2nd-class Vaccinator works under the orders of the Surgeon in charge of the Civil Dispensary, and the returns show

a total of 637 operations only, of these 588 were successful and 49 unsuccessful, inclusive of 312 who were under one year of age. The per-centage of success was 97·017. On comparison with the work of the previous year, there is a decrease of 375 operations which is not accounted for. The following are the proportions of caste and sex :—

	Males.	Females.
Europeans and East Indians	7	9
Hindus	257	163
Mahomedans	102	99
Total...	366	271

ZEMINDARIES.

SOONDOOR.

I regret to state that with the withdrawal of the Hospital Assistant, the Jaghiredar of Soondoor has ceased to employ a Vaccinator on his Estate.

GANJAM.

In this district between seven landed Proprietors, Zemindars, and Court of Wards' Agents, twenty-five Vaccinators are employed; these, with six Government Vaccinators who work in the Hill Tracts of Orissa, have their work superintended by a Superintendent appointed for the purpose. The Superintendent (Hospital Assistant Chinnasawmy) was removed from the charge to another district in consequence of ill-health, and Vaccinator G. Lutchmunursiah has been appointed to officiate as Superintendent. The number of Vaccinators has been increased by four during the year under notice. The total number of operations performed by these men was 9,734, of which 9,053 were successful and 681 unsuccessful, giving a per-centage of success of ninety-three, thus showing a large increase of 5,499 operations over that of the previous year. The total comprising the following proportions of sex and caste :—

	Males.	Females.
Hindus	5,456	4,272
Mahomedans	4	2
Total...	5,460	4,274

GODAVERY DISTRICT.

In this district two Vaccinators are employed by the Zemindar of Pittapoor. These men work under the orders of the Superintendent of Vaccination of the district. The total of operations during the year

under notice was 978, of whom 700 were successful and 278 unsuccessful, inclusive of 20 subjects under one year of age, with a per-centage of success of 71·574, comprising—

	Males.	Females.
Europeans and East Indians	12	3
Hindus	643	318
Mahomedans	2	...
Total...	657	321

On comparison with the work of the previous year, the returns show a small decrease of 133 operations, accounted for by the decrease of Vaccinators in the transfer of some of them to the Kistna District.

MADURA DISTRICT.

Shevagunga.

This Estate has again, at my urgent request, employed three Vaccinators, one 1st-class and two 2nd-class. I visited this Estate in the month of September, and persuaded the Proprietress to maintain vaccination as has been done hitherto on her estate, to which request she acceded. The work I saw was good: 772 operations were reported, of which 771 were successful, and one unsuccessful, with a per-centage of success of 99·870. Of the total, 66 were under one year of age, giving the following proportions of caste and sex:—

	Males.	Females.
Hindus	382	375
Mahomedans	8	7
Total...	390	382

On comparison with the work of the previous year, there is a large decrease of 1,788 operations, caused chiefly by the reduction in the number of Vaccinators for a time.

Ramnad.

On this Estate hitherto one 2nd-class Vaccinator only was employed, and during my visit in September last I found the man idle and doing no work at all, when he was dismissed. I had an interview with the Proprietor, and after much urgent solicitation he consented to employ three 2nd-class Vaccinators for the future. Three qualified men were appointed, and placed under the supervision of the Native Surgeon in charge of the Estate Dispensary, who kindly undertook the work of supervision. The Vaccinators appear to work well and to give satisfaction. They report 1,313 operations, and only two of this number are

said to have failed. In the total is included 347 children under one year of age. The per-centage of success given is 99·847, with the following proportion of caste and sex :—

	Males.	Females.
Europeans and East Indians	...	1
Hindus	787	474
Mahomedans	24	27
Total...	811	502

There is a small increase of 474 operations over that of the previous year.

NORTH ARCOT.

1.—Pooncanoor.

One Vaccinator worked on this Estate during the year under notice. He shows a total of 1,449 operations, with a per-centage of success of 97·515. Of the total, 1,413 are reported to have proved successful, and 36 unsuccessful; 298 cases were under one year of age. The following are the caste and sex operated on :—

	Males.	Females.
Hindus	853	596
Mahomedans	...	...
Total...	853	596

There is an increase of 625 operations on comparison with the work of the previous year, and an increase of 4·75 in the per-centage of success.

2.—Carvettenugger.

The total number of operations in this Zemindary during the year amounted to 88, of which 77 were successful and 11 unsuccessful, thus showing a per-centage of success of 87·5. Of the total, 17 children were under one year of age. Vaccination was performed for only five months in this Zemindary, the Vaccinator being only entertained in the month of August, through the exertions of the Superintendent of that district. The following comprise the caste and sex of those operated on :—

	Males.	Females.
Hindus	57	16
Mahomedans	5	10
Total...	62	26

3.—Bungarupalim.

A Vaccinator worked in this Zemindary for six months, and was appointed in July 1869, through the exertions of the Superintendent

of the district. He reports a total of 173 operations, including fifteen cases under one year of age, with a per-centage of success of 95·375. Of the number vaccinated upon, 165 succeeded and 8 failed. The caste and sex are as follows :—

	Males.	Females.
Hindus	100	72
Mahomedans	...	1
Total...	100	73

KISTNA.

NUZEED.

This Estate formerly belonged to the Godavery District, but has since been transferred to Kistna. For nearly a year no Vaccinator worked here; under instructions from this Office and with the consent of the Zemindar, the Superintendent of the district appointed two qualified candidates, one in April, and the other in June 1869. These Vaccinators show 384 operations, of which 37 were under one year of age; 329 were successful, and 55 unsuccessful. The per-centage of success was 85·677. The following comprise the caste and sex operated on:—

	Males.	Females.
Hindus	179	150
Mahomedans	26	28
Total...	206	178

TANJORE DISTRICT.

POODOOCOTTAH.

Three Vaccinators worked on this Estate during the year. They performed 3,832 operations, including 297 under one year of age, with a per-centage of success of 94·415, and comprising the following proportion of caste and sex :—

	Males.	Females.
Europeans and East Indians...	1	...
Hindus	1,978	1,756
Mahomedans	50	47
Total...	2,029	1,803

This being a Political Estate, the Governor's Agent has intimated that His Highness the Rajah does not wish that the work of his Vaccinators should be supervised by this department, so that all interference as regards this department has ceased, and in the next Report the notice of this Estate will be omitted altogether. There is already a decrease of 340 operations on a comparison with the work of the previous year, and it is to be regretted that the supervision of this department has been withdrawn.

NELLORE DISTRICT.

Vencatagherry.

The Vaccinator on this Estate has been working throughout the year, and shows a total of 906 operations, including 39 cases under one year of age. The per-centage of success is 96·688. On the whole 876 cases succeeded, and the rest failed. The caste and sex are as follows :—

	Males.	Females.
Hindus	479	397
Mahomedans	15	15
Total...	494	412

On comparison with the work of the previous year, a large decrease of 1,827 operations is shown, which is not accounted for.

VIZAGAPATAM.

Twenty-seven Vaccinators are employed in this district by the several landed Proprietors. They are distributed among the different parts of the district, and their work collectively during the year under review was 8,437 cases. 867 of these are under one year of age, and the per-centage of success is 89·391. The caste and sex of the cases operated on are as follows :—

	Males.	Females.
Europeans and East Indians...	4	3
Hindus	4,813	3,580
Mahomedans	21	16
Total...	4,838	3,599

The following is the list of Proprietors :—

	Estates.	No. of Vacci-nators.	Names of Proprietors.
1	Cassipuram and Vizagapatam	6	The Hounourable the Maharajah of Vizianagram.
2	Bohili, Pentavaha, Chidicada, and Juganadapuram ...	4	Rajah Stri S. K. Royadapa.
3	Jeypore	6	Rajah Sri Ramcheudrasou Mahosez Guru.
4	Salar	1	Rajah S. Pedhapyur Simhulu Bahadoor Guru.
5	Madgole	1	Sri M. K. Bhupati Guru.
6	Belagam	1	Sri V. V. Dhutraz Guru.
7	Cossimota and Milipaka ...	1	Sri Miramiamal Guru.
8	Goodacherda, Anakapilly, and Korussrolu ... Bharinakam, Mungapaka and Srivampooram.	2	Sri Godajauokaya Guru.
9	Theroomahanedpooram ...	1	S. A. Atchayamah Guru.
10	Nukkapili and Kuppali ...	1	G. Narainah Gajipattu Row Guru.
11	Kurtah, Mentina, and Mugeradu	1	Sri Jungunti Sitayanineah Guru.
12	Palconda and Hinjiram ...	2	Messrs. Arbuthnot & Co., Madras.
	Total...	27	

On comparison with the work of the previous year, an increase of 3017 is shown for the year under review. Of the Zemindaries that have been in full operation throughout the year, that of Ganjam shows the largest number (9,734), whilst the Zemindary of Carvettenugger shows the smallest, and the Zemindary of Shevagunga, the highest percentage of success of 99·870.

CIVIL DISPENSARIES.

1.—Negapatam.

One Vaccinator is employed by this Institution, whose work during the year comprises 611 operations, including 93 cases under one year of age. The per-centage of success is 86·415, giving the following proportion of caste and sex :—

	Males.	Females.
Europeans and East Indians...	4	7
Hindus	242	250
Mahomedans	60	48
Total...	306	305

The Returns show a decrease of 340 below the work of the previous year.

2.—Cuddalore.

This Dispensary employs a Vaccinator, whose work during the year comprises 590 operations. Of these 74 were under one year of age. The per-centage of success is 98·966, with the following proportions of caste and sex:—

	Males.	Females.
Europeans and East Indians...	...	2
Hindus	302	268
Mahomedans...	11	7
Total...	313	277

showing a decrease of 59 operations below that of the previous year.

3.—Old Town, Cuddalore.

One Vaccinator has been employed by this Institution. The total number vaccinated during the year has been 94, with a per-centage of success of 72·340. No children under one year of age were operated on during the year. The caste and sex operated on are as follows:—

	Males.	Females.
Hindus	38	35
Mahomedans...	13	8
Total...	51	43

In this Institution a decrease of 19 operations is shown during the year under notice.

4.—Munargudi.

The Vaccinator working in this Dispensary shows 621 operations during the year, of which 71 are under one year of age. The per-centage of success is 95·491. The following are the caste and sex operated on:—

	Males.	Females.
Europeans and East Indians...	1	...
Hindus	351	269
Mahomedans...	...	...
Total...	352	269

This Institution shows a decrease of 363 operations during the year 1869.

MUNICIPALITIES.

1.—Bimlipatam.

The work of the Vaccinator in this Municipality comprises 197 operations, with 7 cases under one year of age. The per-centage of success is 86·294. The following is the proportion of caste and sex :—

	Males.	Females.
Europeans and East Indians...	1	6
Hindus	94	96
Mahomedans...	...	...
Total...	95	102

This Municipality shows a small increase of 6 operations over that of the previous year.

2.—Vizagapatam.

One Vaccinator works here during the year. He shows 542 operations, with 73·985 as the per-centage of success. 34 children under one year of age were operated upon during the year. The following comprises the caste and sex operated on :—

	Males.	Females.
Europeans and East Indians...	57	20
Hindus	362	79
Mahomedans...	19	5
Total ...	438	104

This Return shows a decrease of 340 operations below that of the previous year.

3.—Cuddapah.

A total of 324 cases were operated on by the Vaccinator here, of which 51 were under one year of age, and the per-centage of success was 74·074, with the following proportion of caste and sex :—

	Males.	Females.
Europeans and East Indians	1	...
Hindus	161	55
Mahomedans	67	40
Total...	229	95

This Municipality shows a decrease of 40 operations below that of the previous year.

4.—Trichinopoly.

The operations of two Vaccinators in this Municipality comprise 1,217 cases, with a per-centage of success of 83·319. The number of

children vaccinated under one year of age was 659. The caste and sex are as follows :—

	Males.	Females.
Europeans and East Indians	13	13
Hindus	628	355
Mahomedans	118	90
Total...	759	458

This Municipality shows a decrease of 363 operations below that of the previous year, which is not accounted for.

5.—Cochin.

The Vaccinator here reports 513 cases as his work during the year under notice, of which 9 are under one year of age. The per-centage of success was 66·471, and the following is the proportion of caste and sex :—

	Males.	Females.
Europeans and East Indians	15	11
Hindus	274	196
Mahomedans	15	2
Total...	304	209

There is a decrease of 68 operations in this Municipality for the year under notice.

6.—Guntoor.

438 cases are reported to have been operated on by the Vaccinator here, 43 of which were under one year of age. The per-centage of success was 81·050, with the following proportion of caste and sex :—

	Males.	Females.
Europeans and East Indians... ...	5	5
Hindus...	176	140
Mahomedans	58	54
Total...	239	199

There is a decrease of 89 operations in this Municipality during the year under notice.

7.—Nellore.

The total operated on by the Vaccinator here was 1,092, including 93 under one year of age. The per-centage of success was 78·479. The caste and sex are as follows :—

	Males.	Females.
Europeans and East Indians	23	9
Hindus	506	392
Mahomedans	117	45
Total...	646	446

A small increase of 58 is shown in this Return for the year under notice :—

8.—Bellary.

The two Vaccinators here operated on 1,117 cases, of which 612 were under one year of age. The per-centage of success was 95·613. The caste and sex are as follows :—

	Males.	Females.
Europeans and East Indians	29	16
Hindus	370	327
Mahomedans	208	167
Total...	607	510

There is a large decrease of 542 operations shown in the Returns of this Municipality during the year under notice.

9.—Tanjore.

The two Vaccinators employed by this Institution show 1,180 operations for the year, of which 82 were under one year of age, with 94·830 of success per cent. The caste and sex operated on are as follows :—

	Males.	Females.
Europeans and East Indians	3	3
Hindus	614	519
Mahomedans	21	20
Total ..	638	542

A small decrease of 10 operations is shown in the Returns of this Municipality during the year under notice.

10.—Dindigul.

The total work of the Vaccinator here comprises 770 operations, with a per-centage of success of 88·441. 118 children under one year of age were operated on during the year. The proportion of caste and sex is as follows :—

	Males.	Females.
Europeans and East Indians	1	1
Hindus	422	283
Mahomedans	37	26
Total...	460	310

A decrease of 372 operations is shown in this Return during the year under notice.

11.—Chicacole.

248 operations are shown by the Vaccinator here, comprising 6 cases under one year of age. The per-centage of success is 63·305, with the following proportion of caste and sex :—

	Males.	Females.
Europeans and East Indians	7	1
Hindus	153	65
Mahomedans	20	2
Total...	180	68

This Municipality shows a decrease of 164 operations during the year under notice.

12.—Vellore.

The work of the Vaccinator here for the year has been 516 operations, comprising 181 under one year of age. The per-centage of success is 87·986. Proportion of caste and sex :—

	Males.	Females.
Europeans and East Indians	7	2
Hindus	227	167
Mahomedans	49	64
Total ..	283	233

This Municipality shows a large decrease of 601 operations during the year under notice.

13.—Combaconum.

One Vaccinator employed here shows 946 operations for the year, including 168 under one year of age, with a per-centage of success of 93·023. The caste and sex are as follows :—

	Males.	Females.
Europeans and East Indians	...	1
Hindus	663	261
Mahomedans	14	7
Total...	677	269

This Municipality shows a small increase of 55 operations over the previous year.

14.—Salem.

932 cases were operated on by the Vaccinator in this Municipality; 428 were under one year of age. Per-centage of success is 97·532. The caste and sex are as follows :—

	Males.	Females.
Europeans and East Indians... ...	5	1
Hindus	483	387
Mahomedans	31	25
Total...	519	413

/

No work was done in this Municipality during the previous year.

15.—Madura.

884 operations are reported by the Vaccinator of this Municipality, of which 159 were under one year of age, with a per-centage of success of 92·081. The proportion of caste and sex is as follows:—

	Males.	Females.
Europeans and East Indians	...	...
Hindus	471	410
Mahomedans	1	2
Total...	472	412

No work was done in this Municipality during the previous year.

16.—Conjeveeram.

768 operations are reported by the Vaccinator of this Municipality, of which 133 were under one year of age. The per-centage of success is 82·812. The caste and sex are as follows:—

	Males.	Females.
Europeans and East Indians	...	...
Hindus	433	320
Mahomedans	9	6
Total...	442	326

This Municipality shows a large increase of 668 operations during the year under notice.

17.—Berhampore.

406 operations are shown by the Vaccinator of this Municipality, comprising 25 under one year of age. The per-centage of success is 83·251. The proportion of caste and sex is as follows:—

	Males.	Females.
Europeans and East Indians... ...	12	7
Hindus	267	115
Mahomedans	3	2
Total...	282	124

One operation over that of the previous year is given in this Municipality.

MADRAS RAILWAY.

Four Returns were received from the Apothecaries of the Madras Railway through the Consulting Physician J. Urquhart, Esq., M.D. They show a total of ten operations only, of which one failed, and the

per-centage of success was 90. Four cases were vaccinated under one year of age. I regret to say that the work is very small, there being a large decrease of 148 operations. The caste and sex vaccinated are as follows:—

	Males.	Females.
Europeans and East Indians	2	2
Hindus	4	2
Mahomedans	...	...
Total...	6	4

JOHN SHORTT, M.D., Surgeon,
Superintendent-General of Vaccination,
Madras Presidency.

Report on Vaccination by Medical Subordinates for the year 1869.

The Vaccine Returns of the Medical Subordinates have been very irregularly received, and, as a body, they have not sufficiently exerted themselves during the year under notice. The number of operations performed by the Medical Subordinates for 1869 has been 14,910 only, thereby showing a large decrease of 14,440 below that of the previous year. The per-centage of success, which is 69·114, is also less than 1868 by 18·536.

The largest number of operations is shown in the Southern Division; next follows the Presidency and Northern Divisions, whilst the Pegu Division shows the smallest number.

The following Medical Subordinates show the largest number of operations. V. Venkatapathy stands first: he gives 587 operations during the year, of which 461 proved successful; he seems to have exerted himself well in the cause of vaccination; next stands N. Govindarajooloo, whilst the number vaccinated by 3rd-class Hospital Assistant Rajagopaul comprise 396 unsuccessful operations:—

Rank and Name.			General Number.	Station.	Number vaccinated.	Successful.	Per-centage of success.
1st-Class	Hospl. Asst.	V. Venkatapathy	206	Jail, Chittoor	587	461	78·5
2nd	do.	N. Govindarajooloo	556	Cuddalore	465	415	89·247
3rd	do.	T. Rajagopaul	735	Jail Hospl., Bellary.	396	...	...
1st	do.	Appavoo	217	Jail, Chingleput	365	198	54·246
3rd	do.	D. Bastian	704	Jail, Trichinopoly	345	253	73 333
3rd	do.	Veeraragoo	628	Jail, Calicut	288	272	94·444
3rd	do.	N. Moonisawmy	...	Central Jail, Salem	272	188	69.117
1st	do.	P. Pursaramooloo	151	Jail Hospl., Kurnool.	251	132	52·589
1st	do.	M. Venkatasawmy	201	Sub-Collector's Department, Salem	247	111	44·939
2nd	do.	V. M. Appavoo	497	Jail, Madura	246	126	51·219
2nd	do.	P. Venkatasawmy	397	Jail, Berhampore	221	94	42·533
2nd	do.	P. Parthasardhy	484	Civil Dispensary	211	142	67·298
1st	do.	M. Madurantigam	...	Central Jail, Salem.	208	152	73·076
2nd	do.	Shaik Madar	639	R. W. 31st Regiment L. I.	205	121	59·024
1st	do.	A. Lutchmanaraidoo.	365	Central Jail, Rajahmundry	193	109	56·476
1st	do.	T. Vencataroydu	139	Do.	171	112	65·497
3rd	do.	T. Ponumbalum	763	Civil Dispy., Mangalore	153	130	84 967
1st	do.	A. Ramasawmy	368	Jail, Rajahmundry.	145	110	75·862
2nd	do.	C. Senthavalo	453	Civil Dispensary, Palamcottah	140	109	77·857

Rank and Name.	General Number.	Station.	Number vaccinated.	Successful.	Per-centage of success.
1st-Class Hospl. Asst. J. Venkatachellum.	...	Jail, Tranquebar ...	139	104	74·820
3rd do. T. Mudraymootoo....	702	Jail Hospital, Mangalore	136	133	97·794
1st do. C. S Kundasawmy...	346	Revenue Survey, Palameottah ...	134	101	75·373
2nd-Class Asst. Apothy. E. Ailsworth ...	...	L. W. 31st Regiment L. I.	133	102	76·691
1st-Class Hospl. Asst. P. Soobiah ...	345	Civil Dispy., Guntoor	131	92	70·229
1st do. V. Burlum ...	330	H. M.'s 4th Regiment N. I.	130	92	70·769
1st do. V. Ramasawmy ...	256	Sub-Collr.'s, Palamcottah	125	89	72·000
2nd do. F. Joseph ...	429	Collector's Department, Tanjore ...	124	100	80·645
3rd do. P. Soobanadru ...	844	H. M.'s 4th Regiment N. I.	117	72	61·538
1st do. Tirumalay Naiek...	351	Jail, Tanjore ...	114	84	73·684
3rd do. A. Mootoosawmy...	811	Civil Dispensary ...	109	67	61·467
1st do. V. Nummiah ...	346	Civil Dispy., Madura	106	82	77·358
Actg. Asst. Apothy. H. R. Byrne ...	...	Seetabuldee Hd.-qrs., 20th Regt. N. I.	103	101	98·058
1st-Class Hospl. Asst. D. Bauliah ...	271	Jail Hospital, Cuddapah	103	42	40·775

JOHN SHORTT, M.D., Surgeon,
Superintendent-General of Vaccination,
Madras Presidency.

Extracts from the Reports of the District Superintendents of Vaccination.

1.—BELLARY DISTRICT.

Superintendent, B. Puttaby.

Establishment, six 1st-class and ten 2nd-class Vaccinators.

Cost of Establishment, Rupees 3,120-4-2.

Value of each case vaccinated, Rupees 0-4-10.

Total number vaccinated during the year, 10,170.

Per-centage of success, 84·296.

This district comprises fifteen talooks, with an area of 11,351 square miles, and an estimated population of 12,91,932.

In the beginning of the year the whole staff of Vaccinators worked in the Adoni Talook for more than two and a half months, and a great many subjects were operated on in that extensive talook, over 500 cases in the town of Adoni alone. The people in some villages were unwilling to get their children vaccinated, notwithstanding the prevalence of small-pox at Adoni and its suburbs occasioning mortality. In the middle of March I received orders from the Superintendent-General of Vaccination that small-pox was prevalent in Hospett and Koodligi Talooks. We proceeded thither on completing the work we had in hand ; I met the Collector of Bellary at Koodthiny, who ordered me to go and operate at Humpy, where crowds of people were collected together to witness the festival. Here we met with great objections from the people, but succeeded in operating on about 500 cases ; and I proceeded on to the Hospett Talook sending on six Vaccinators to Koodligi, where they found that small-pox was not prevalent in the villages, and no children available for vaccination. This place was visited during the previous year by the staff, and the Vaccinators on their return produced memorandums from the headman of the village stating that there were no children in the villages to be vaccinated, which fact was reported to the Collector. These six Vaccinators vaccinated only about 100 children in Koodligi and some of its villages. When the recess commenced and the Vaccinators were distributed over the district, one to each talook to keep up vaccination in some of the principal towns, whilst my own head-quarters was established at Hospett. On the opening of the field season the villagers of this talook totally refused vaccination, and the Reddies and Curnums scarcely assisted the Vaccinators. They say " what assistance can we give when the people refuse to get their children vaccinated and conceal them, and how can we enter their houses, as vaccination is

entirely optional." The numbers operated on in this talook were not large. The staff then entered and worked diligently in the Anantapoor Talook for almost two months; the numbers obtained were pretty fair. At first the people in some villages refused vaccination in this talook also; but the Tahsildar of Anantapoor took an interest in the work, and issued strict orders to the Reddies and Curnums to assist the Vaccinators. He sent for the people who had refused, and explained to them the benefits of vaccination, and directed them to get their children vaccinated, intimating that otherwise they would meet with the displeasure of Government. This intimation spread over the villages, and the people of some of them voluntarily brought their children for operation. In other villages the people totally refused vaccination and concealed their children, saying that they do not practise it in their family, though I tried my best endeavours by coaxing, threatening, &c. Our operations next commenced in the Dhurmavum Talook. This talook is very large and extends for about eighty miles. The villages are situated far from each other, but the work was carried on here very successfully. Some villagers who refused vaccination were reported to the Tahsildar, who rendered us every assistance; yet the people persisted in refusing to allow their children to be vaccinated. Another evil is, that the parents refuse to give lymph from the arms of their children, or send them with the Vaccinators for the purpose, that they are obliged to stop in one village, until they can collect a sufficient quantity of lymph to enable them to go to other children in different villages, thus small numbers are obtained, and that with great difficulty.

The Returns show a decrease of 2,153 numbers below that of the previous year, which may be accounted for by the people of many villages being quite ignorant of the benefits of vaccination, and consequently refusing to have their children vaccinated, and several of the Vaccinators suffering from repeated attacks of fever and itch, &c., which rendered them unable to perform their proper quantity of work. The climate of this district disagrees with the new Vaccinators, and they frequently fall sick from not being able to get proper meals from the villages. The staff of Vaccinators behaved well during the year, and none were punished with fines or other reprimands.

2.—COIMBATORE DISTRICT.

Superintendent J. Ramiah, Hospital Assistant.

Establishment, four 1st-class and seven 2nd-class Vaccinators, two Special 1st-class Vaccinators for the Neilgherries.

Cost of Establishment, Rupees 2,787-11-8.

Value of each case vaccinated, Rupees 0-3-3.

Total number vaccinated during the year, 13,515.

Per-centage of success, 87·872.

This district comprises eleven talooks, with an area of 8,470 square miles, and an estimated population of 14,30,738.

The annual Return exhibits the work from 1st January till the 31st December. Of this period the working itineration embraced nine months, and the recess extended over the remaining three months. In January my head-quarters was established at the Sathiamungalum Talook, where I remained till the 24th of February. On our arrival small-pox was raging in an epidemic form in this talook, and the staff went about from house to house repeatedly, but few could be induced to protect themselves by vaccination at first. Gradually we succeeded in overcoming the stubbornness and prejudices of the people through the kind assistance of Mr. Galton, the Head Assistant Collector, who kindly explained the benefits of vaccination as each of the village puttahs were being delivered to the people during the Jummabundy at Gosepettypallium, and the work progressed slowly at first. We also derived much assistance from the Tahsildar of the talook, whose influence over the Monegar and people was of special service to us. The people in these parts are greatly averse to vaccination, and especially so in the hot months, owing to the prevalence of fever. On the opening of the field season, the staff assembled at Bhowany in July and marched off to Caroor, and completed the work of that entire talook by the 12th October. We then entered Kongiem, a sub-division of the Dharapooram Talook, where we remained till the 15th of November. Here also we met with great opposition, but these were overcome by the kind assistance of the Tahsildar and through our own exertions. From Kongiem we entered the Peroondoray Talook, and proceeded from thence to Dharapooram, where we are now working. As these parts were never before visited by any of the staff, and prejudices of the people were very great, so that much difficulty was experienced in introducing vaccination. During the year under notice we have visited four and a half talooks successively. The annexed table shows the number of operations and the description of lymph, with the results:—

———	Number vaccinated.	Successful.	Unsuccessful.	Absent.
From lymph in capillary tubes	135	114	14	7
From lymph in plates of glass	2,009	1,564	212	233
From lymph in lymph bottles	18	16	1	1
Arm-to-arm operation ...	11,315	10,181	271	893
Scabs	8	...	8	...
Total...	13,515	11,875	506	1,134

Glass lymph has to be resorted to largely, in consequence of the pernicious habit the people have of applying a paste of Neem leaves and saffron to the vesicles, and thus destroy them; and at others the children are concealed, and the people refuse to allow lymph being taken, which interferes greatly with arm-to-arm operations. There is a decrease of 4,695 operations below that of the previous year, accounted for by the incompleteness of the staff of Vaccinators, and the appointment of recruits; it takes the latter sometime to get familiar with their work, and being new to the district, they are subject to attacks of sickness, and it requires time, also, to become familiar with the habits, customs, and manners of the people of the district. The people in this district are, on the whole, averse to vaccination, and even when convinced of its advantages in preventing attacks of the small-pox, they will not subject their children to the operation, each one assigning some frivolous excuse. Apathy and careless indifference on the part of the Village Officials are the chief obstructions I experienced in this district. Whenever these officers show an indifference to vaccination, the villagers follow their example, and will not consent to allow their children to be vaccinated, as they look up to them as "Lords of the land" whose footsteps they, as a rule, follow. In some places where the village heads offer their assistance, great numbers of children get vaccinated, and all prejudices yield to the persuasion and advice of these officers, the more so when their own children are first submitted to the operation. If we can secure the proper aid of Monegars and Kunnakars, nothing further would be required to assist us in spreading the benefits of vaccination. To this effect I have frequently urged the Collector and his Assistants, and although the Village Officials receive strict orders to assist us, their aid is reluctantly and indifferently given, and in some places is not given at all, as they have various ways of shirking this duty. Such carelessness and indifference on the part of the Monegars should, in my humble opinion, be punished; if not, the introduction of compulsory vaccination, as in Europe, would remove all prejudice and stubbornness of the people, and even the anger of their Goddess from the face of the earth. Small-pox has prevailed largely in some parts, some cases proving fatal. As I have already mentioned, in my annual Report, the present mode of working answers admirably well. No irregularities worth describing attended the vaccine disease during the year. The number of subjects vaccinated under one year of age is 3,147. I never had the opportunity of seeing cases of small-pox after unmistakeable vaccination, or vaccination on well-marked cases of small-pox.

3.—DUDDAPAH DISTRICT.

Superintendent, P. Ramalingum, No. 533, Hospital Assistant.

Establishment, four 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,106-7-6.

Value of each case vaccinated, Rupees 0-9-4.

Total number vaccinated during the year, 3,596.

Per-centage of success, 91·129.

This district comprises eleven talooks, with an area of 9,177 square miles, and an estimated population of 11,44,759.

The number of subjects vaccinated during the year is 3,596, whereas in the year 1868 it was 5,569. If we take into consideration the number of men employed and the work they did during the year under review, and if we contrast this with that done in 1868, there will be found little or no difference. There is an erratic class of people called "Woddurs," whose children, after being vaccinated in one place, could not be expected to be seen at the same spot; for these people traverse great distances, and are constantly shifting their abodes in pursuit of their avocations. Such cases have been marked as unsuccessful, provided they were seen by the village officials, and those who were not seen by them have been struck off altogether from our account. But such occurrences were less than forty. The majority of the staff suffered more or less in December from fever, to which the new as well as the old hands sent from other districts, have been rendered more or less susceptible by the peculiarity of this climate ; and it is this which has, to some extent, retarded the progress of our work. In the Talook of Royachoty, when demarcation was progressing in the month of August of the year under report, some of the ryots wereaway to their fields for the purpose of aiding the demarcation people, and this interfered very much with the work of the staff, and we returned from the village without success, though we did not fail in our usual duty of giving to the people a short lecture on the benefits attendant on vaccination, and of reading and explaining to them a treatise on that subject. Previous to the commencement of the recess, our work was conducted at Pullumpett, Sidhout, and Budvail, making my head-quarters at Poodootoor during the recess, and distributing Vaccinators over the talooks. I made a personal inspection of the work conducted by them at Poodootoor, Kadiri, and Madnapalli. For the work done in the month of July in different talooks, a list of the subjects vaccinated was duly furnished by us to the Village authorities, in accordance with the Circular issued by the Board of Revenue, dated 21st June 1869, No. 4,461. The remaining five talooks of the district, Pulivendla, Royachoty, Cuddapah, Jammalamadugu, and Voilpaud were successively visited after the recess, except a few villages which lie to the west of Pulivendla, as cholera was prevailing in them in the beginning of the monsoon, of which a report has been sent.

Obstructions of various kinds exist to the wide-spread of vaccination, especially in the Ceded Districts, where civilization is in a low state. When these ignorant people are requested to get their children vaccinated, they reply, that unless the operation is first performed on the children of the Village authorities, they would not avail themselves of the advantages derivable from it. Thus it is obvious that they require an example before they can be induced to accept vaccination. Sometimes it so happens that after the Village authorities get their own children vaccinated, the villagers turn round and say, they are not to be actuated by the fears of Government as the Village authorities are, and consequently to follow their footsteps. Some again, though fully convinced of the salutary effects of the operation, and its prophylactic value, would yet require the staff to defer the operation till a more convenient season arrives, when they could get their children operated without detriment to their agricultural pursuits, which, in their estimation is more valuable than the life of their offspring. On several occasions, especially in the time of cultivation, youngsters only remain in the houses, while the older folks are busy in the fields. Neither the village officials nor the staff could then induce them to get their children vaccinated. In some places, as soon as the villagers are informed that the Vaccinators have approached their village, when they slowly and artfully pack off their children to the fields, &c., or hide them till they are quite sure of the departure of the staff. For instance, the Village Munsiff of Pennapirur, in the Sidhout Talook, deceived the Vaccinators when they went to that village to vaccinate—and this fact, though trivial in itself, will, I trust, serve to convince the authorities of the manner in which the Potails thwart our endeavours. As soon as the said Munsiff met us at the entrance gate of the village, he affected to be very sincere, and said that if we were seen in the villages, the people would hide themselves and we would have no chance of getting any subjects, but that he himself would go over and induce the parents to bring their children to the spot where we were to wait. He went in and returned after a while, when he coolly told us that no children were to be seen in the village, and that he did not know what had become of them. This having aroused our suspicions we entered the village, and were told that the parents had hidden them under wicker baskets in the fields, and we found to our amazement that such was the fact, for when we repaired to the fields and turned up one or two of them, nearly half a dozen children were found under each, but we were not able to know who their parents were; but I made a report of the same to the Tahsildar, who was kind enough to prevail upon the very Munsiff Reddy to undergo the operation, with the view that the timid and ignorant inhabitants would follow the example, and this expectation was, in a short time,

realized to some extent. In some places where superstition and prejudice have reached their zenith, the Vaccinators had to stay two or three days to prevail on the people to get their children vaccinated, as it is a custom with them that unless a few are at first prevailed upon to get vaccinated, the rest will not readily bring their children. The heads of some of the villages do not give the correct number to be vaccinated in their village, while, at other times, they bring those who are attacked with the small-pox, hiding those who are actually in need of the operation, and falsely asserting that all are attacked with the epidemic. If those hidden chance to be seen by us, the village heads would call such strangers to the village, or that their parents would not consent to their being operated on. A great feature which contributes as an impediment to the steady and speedy progress of vaccination is seen in the impostors who visit certain talooks in the district to impose on them and induce them to undergo the operation, asserting that the process of inoculation is genuine and the one truly adapted to ward off the disease. This being a prophylactic against small-pox, they undervalue vaccination, and call it a perverted practice. When visiting the Talook of Royachoty, I was informed of this, but the inhabitants would not tell who the people were, nor do the Village Officials know, who, in fact, deny all knowledge of the matter. It is thus that the people are misled, and when they once give way to such notions, it is difficult to eradicate them either by persuasion, explanation, or remonstrance. It is also a matter of great surprise to hear from the people that the inoculators begin their operations with certain ceremonies and incantations suited to the minds of the superstitious, and at the dead of night, lest they should be betrayed. After performing the usual operations on the wrist, they make some "Puja" or supplication to the Goddess "*Gangamma*" in the presence of the parents of the subjects, and sprinkle cocoanut-water with Margosa leaves, uttering some spells of magic, and assuring them that as many drops as were spilt by the sprinkling on the body, so many vesicles will be produced by the inoculation. In addition to this, they enjoin a peculiar diet, a perverted observance of hygiene, and superstitious rites for the subjects during the subsequent period of the completion of the process. I did my best to convince the people that they were imposed on, and that the process of inoculation which was practised by the impostors will, instead of doing good, invite mortality amongst them. They appear to have been bound by an oath not to divulge the operators and their names, and, whatever be the inducement offered to them, they will not reveal it for fear that they as well as the impostors will be punished. There is another difficulty in getting at the true names of the parents, for they give such as to admit any number of *aliases* of their own as well as those of their offsprings. Hence errors have crept in the names marked

in the Register of the Vaccinators; these were, however, afterwards corrected. Most of the Talook authorities do not arouse the village Officials to the due appreciation of the boon conferred by vaccination, and it is a matter of much regret to observe that they are also more or less ignorant and superstitious. It often happens that when one is ready to undergo the operation after much inducement on our part, another, in no way connected with the person, comes up and instils into the minds of the parents an unfounded fear that the operation is productive of malignant effects, and the parents often withdraw the subjects before they are vaccinated. Reports from the Vaccine Department against such Village authorities are treated by the Tahsildars with much indifference, sometimes dropping the matter altogether. The praiseworthy conduct of the Village Munsiff of Yerraguntlakota, in the Pullampet Talook, deserves special notice, and if all the Village Officials were as sensible to the benefits of vaccination and as co-operative with the staff, much good would be derived throughout the district. This Munsiff, in the beginning of the year under report, heard that the staff was working in the adjacent villages, and sent a cart to the Vaccinators, with a request to come up to the village, as he could get several subjects. It gave me much pleasure to observe that nearly the whole of the villagers were collected together, and more than 200 subjects were produced and operated on. In the village, where vaccination was conducted with persuasion and remonstrance during the last year, the prejudice and superstition is now gradually dispersing, and we long for the day when, as they emerge from ignorance, they will appreciate vaccination. I brought these obstacles to the notice of the Collector, requesting him to issue a Notification to the Talook and village authorities to render their necessary and reasonable aid to spread vaccination, and, as he is known to be much interested in the matter, I believe he will take the necessary steps to remedy the evil. It seems that some mortality had occurred in Royachoty and Voilpaud Talooks from the effects of small-pox, the cause of which may be chiefly attributed to the nefarious practice of inoculation practised by impostors. For the wide and effectual spread of vaccination, there appears to be a good remedy, which, if countenanced by Government, will no doubt remove every obstacle. If recourse to compulsory means be allowed, the people, for whose welfare and safety so much beneficence has been bestowed by the ruling power, will duly appreciate it, and the exertions of the staff will, on all sides, be crowned with success. Perhaps it may be argued, that the sanction of such compulsory means is not compatible with justice; but when enactments have been made to enforce labour from the people in case of breach of tank-bunds, &c., and also to prevent the spread of venereal contagion, we see that the Government had in view the welfare of the community. It is with the

view of suppressing the infectious disease of small-pox that Government established the Vaccine Department, and remembering that vaccination is the only remedy against small-pox, and that this was the conviction when the process was introduced into India, it is to be hoped that a Legislative enactment will further the unmolested and speedy spread of vaccination, and it is with that hope that compulsory vaccination is suggested. If this should not meet with the approbation of Government, the only other means of gaining a step in the cause of vaccination lies in constraining the people of a village, where small-pox prevails, to isolate those who are infected with the disease from the rest, and to keep them outside the village till they are cured. They will then perceive the necessity of vaccination and avail themselves of it at once, for they will then be freed from the painful duty of separating themselves from their relatives, and the consequent increase of vaccination will proportionately decrease the spread of small-pox.

Though no ill-effects resulted during the progress of the vaccine disease, yet, I have seen a few vesicles ulcerated a little, owing to the application of irritating substances over it with the avowed intention of depriving the staff of arm lymph. The weather has in no way changed the genuine vitality of the lymph. In some places the people object to giving arm lymph, and on that account they even refuse to appear for inspection, lest lymph should be taken from them. When once the scab is saturated with fresh lymph, and is carefully preserved, it retains its vitality for a long time, and is almost as efficacious as arm-to-arm operation, thereby saving batta-money, which has not cost more than a rupee for the whole year. The number of subjects vaccinated under one year is 220. Four cases were observed in the district, where a mild and very modified form of small-pox seized individuals who had been vaccinated in previous years.

The want of a peon is much felt, and disturbs the due transaction of business. This I remarked in my last Report, and it is again requested that it be brought to the notice of Government. Again, where small-pox prevails, the attendance of the staff is urgently required, and though, in some cases, travelling by Railway expedites the journey, it is very difficult for the Vaccinators who draw 10 and 18 rupees a month to meet the expenses thereby incurred. If, as in other departments, these be allowed to travel free of Railway fares, it will tend greatly to facilitate our work.

4.—GANJAM DISTRICT.

Superintendent, C. Prasadha Row.

Establishment, four 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,532-0-11.

Value of each case vaccinated, Rupees 0-12-2.

Total number vaccinated during the year, 3,328.

Per-centage of success, 84·314.

This district comprises three talooks, with an area of 1,941 square miles, and an estimated population of 504,074.

I beg to report that the opposition met with in this district, mentioned in my last Report, was, in a great measure, overcome, and many were vaccinated. After the recess I visited Berhampore and its adjoining villages, and with my staff I worked there up to the end of August. The rainy season having set in early in September, the Vaccinators were sent to Chicacole and worked in and about Nurasunnapett Talook, where I also went, but the prevalence of cholera interfered greatly with our operations. In some places the people were hard to deal with, especially about Chicacole and its suburbs. The people now accept vaccination as an established institution, but still, there is much indifference shown to it; but assisted by village heads, we hope to succeed. Vaccination is tolerated by the people from the impression that it is the desire of Government that this should be practised, and that they cannot avoid it. But where it is known that it is not compulsory, direct opposition is the result, and the efforts of the staff are then useless. For the last ten or fifteen years vaccination has been carried on here, and much has been done to enable them to appreciate it, but still they keep aloof. It is hence apparent that compulsory vaccination is much needed, which will save the time spent in unprofitable negotiations.

The number vaccinated by the Government establishment shows an increase of 2,082 cases.

There is a great difficulty in keeping up the lymph. Vaccinated children leave the village before the week is out, or are concealed by the parents for fear of lymph being taken from them. The recent order of the Superintendent-General to do away with giving batta to mothers of vaccinated children is very hard, and I do not see how it can be done away with, for when dried lymph is used many failures result, and the people object to vaccine virus being taken from the arms of children, under the impression that it will weaken them in bodily strength. After all, it is no great hardship to take a child with its parent to a distance of a mile or two, as the parent receives batta, and the child sweetmeats, &c. Even when paid they refuse to give virus from the arms of their children; and hence the system of paying batta

cannot be dispensed with. The lymph is good, and there have been no irregularities in the vaccine disease. The year was marked by a prevalence of a severe epidemic of cholera. This disease made its appearance here in April: for the first two months it was scarcely perceptible ; but, on the approach of the rainy season, it began to spread with marked vigour, and it is still lingering in some parts of Nurasunnapett Talook.

Hill Tracts of Orissa, Ganjam District.

Superintendent, G. Lutchmennarsiah (Officiating).

Establishment, six 1st-class Vaccinators only.

Cost of Establishment, Rupees 2,228-1-1.

Value of each case vaccinated, Rupees 0-13-6.

Total number vaccinated during the year, 2,632.

Per-centage of success, 84·234.

This tract is undefined. I assumed charge from my predecessor F. Chinnasawmy in October 1869.

The total number vaccinated by the staff during the past year was 2,632 with more success than was expected. Each Vaccinator, either when operating or securing lymph, is considered to have had much experience in the Vaccine Department. As a whole the staff did their duties well, though they variably differ in the satisfactory discharge of their duties. In January 1869 the operations were carried on in the following talooks:—Merecotta, Kuttunga, Baviruyagam, Goddapoor, Sreerampore, Soovaruaghere, Kothugada, Sokkaband, Gottigada, Buthungee, Turume, and Russelconda. In these places great difficulties were met with in the performance of our duties. The fact of the dreadful journey to Balligada with the Collector of the District struck such terror into the minds of the Vaccinators that they were unwilling to proceed to work in that place, contemplating that they would suffer great calamities as soon as they breathed there; and I would request that competent persons, who can communicate their ideas in the orya language, be appointed to work there permanently, so that vaccination may be speedily propagated, as these hills are frequently over-run by savage and rude inoculators from the neighbouring States of Cuttack, who, having been accustomed to receive something from the Khonds, irregularly operate and disappear, fearing that they would otherwise be stoned to death. The disease of small-pox is prevailing at present at Chinna Kimedy, a Zemindary Estate, where no Vaccinator is employed by the Zemindar. During the year lymph was five times supplied to the Zillah Surgeon, Cuttack, four times to the Apothecary at Russelcondah, and often to the Medical Subordinates at Berhampore.

6.—GODAVERY DISTRICT.

Superintendent, K. Parthasaradhi, officiating.

Establishment, four 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,202-5-1.

Value of each case vaccinated, Rupees 0-3-8.

Total number vaccinated during the year, 9,603.

Per-centage of success, 84·692.

This district comprises nine talooks, with an area of 6,719 square miles, and an estimated population of 12,22,339.

The following Return exhibits the work of twelve months, from 1st January to 31st December 1869. Of this period the recess extended over three months, and the remaining nine were spent in active itineration over the district. Of these twelve months, eight were passed under the superintendence of Goolam Roza, who was relieved by me on the 1st September. There is a decrease of 4,983 operations this year, which may be attributed to the small number of Vaccinators who worked this year, while in 1868 there were twenty-one Vaccinators. During the first five months of this year, only six 2nd-class Vaccinators were attached to this district, and the other posts were left vacant. On entering on my duties, I divided the remaining villages of the talook, that were left unvisited by the Vaccinators, into five groups, and set apart two Vaccinators to each. The staff was thus scattered and having a limited number of villages, each were able to visit every part of the village given them. I myself went daily into the villages, explaining to the people the benefits of vaccination, and inspecting the work of my Vaccinators. On the 7th October I removed my head-quarters to Peddapoor Talook, which is sixty miles from Umlapore. On my arrival there I divided the Vaccinators into three groups assigning three Vaccinators to each. In this way I completed many villages in the talook. As some of the villages of Ramachendrapore Talook are adjacent to these, I began to carry ono perations from the 15th November in these also.

Having had charge of the district for only four months, a retrospect of my work must necessarily be brief. I am now making myself acquainted with the best method of working in this locality. From an experience of four years and three months in this department, and an intimate acquaintance with the people of Northern Circars, I may narrate the obstructions to vaccination in the following few words :—Ignorance, carelessness, and obstinacy—no religious prejudice exists except among the most ignorant—and hence, I see no reason why vaccination should not be compulsory. In the absence of any law enforcing vaccination, much may bo done by Tahsildars and other Native Officials by subjecting their own children to the operation as a sort of timulus to the others. I am sorry to say that even well educated people

here often present frivolous excuses to shirk the work. Nothing short of Legislative enactment can meet this difficulty successfully. Educated men not only refuse giving lymph from the arms of their own children, but often interrupt our taking it from the arms of their servants and friends. How long the department can cope with such difficulties and still keep up vaccination is quite a problem. Instead of solving it, I must beg to state that it is absolutely necessary to make a rule to get lymph from every successfully vaccinated subject. The Village Officials also are not so hearty in their co-operation as before, since the Proceedings of the Board of Revenue, No. 4,461, dated 21st June 1869, has been put into force. When we request their company from street to street, they beg to be excused, stating that they have no right to interfere, but must only inspect the lists left by the Vaccinators. Whenever these officials show an indifference to vaccination, the villagers follow their example and hide their children. In the few villages where the headmen have given their best aid, many children were vaccinated, and all prejudices yield before these officials. Hence I most obediently beg that the officials be compelled to render every assistance to the Vaccinators.

As vaccination is at present optional, I beg to state that the present method of itineration, explanation, and careful supervision appear to be the best means of spreading vaccination just now, and for its better success, the people must become more enlightened, and vaccination be a customary thing ; even here a little help from the officials will go a good way in hastening its general adoption. No ill-effects have resulted from unsuccessful vaccination, and nothing irregular has occurred in the progress of the vaccine disease. The quality and action of the lymph has been good, the vesicles being large, well formed, and distinct, leaving well marked cicatrices. I neither saw anything in the *District Gazettes* about the spread of small-pox in the talooks, nor have I heard of it from the time I took charge. We generally expect this epidemic in the Northern Circars at the beginning of the hot season, and even then rather mild.

The number of children vaccinated under one year of age shows an increase of 101. Had the parents presented their young ones cheerfully, we should have shown a larger increase, especially in this rude part where the parents seldom allow us to vaccinate children below five or six months of age. The statement that the symptoms of vaccination are severer in infants than in grown up persons is, I think contrary to medical experience. No instance of small-pox after unmistakeable vaccination came under my notice from the time I assumed charge, and no cases having unmistakeable marks of small-pox were vaccinated.

Although I am obliged to pay for cart-hire, &c., for removing the official records from my small salary as Officiating Superintendent,

yet, I should like some one to watch them, and I have been delayed on several occasions in both receiving and despatching official covers; consequently I most respectfully beg that a peon be attached to this district.

7.—KISTNA DISTRICT.

Superintendent, C. Singaravaloo, No. 671, Hospital Assistant.

Establishment, four 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,332-13-0.

Value of each case vaccinated, Rupees 0-3-7.

Total number vaccinated during the year, 10,323.

Per-centage of success, 95·398.

This district comprises eleven talooks, with an area of 6,692 square miles, and an estimated population of 1,027,983.

The accompanying Return exhibits the result of vaccine operations from the 1st January to the 31st December 1869. Of this period nine months were spent in itineration, and the recess extended over the remaining three. There is an increase of 36 operations over the previous year.

I shall give a brief sketch of the manner in which the operations were carried on during the year. In January my head-quarters was at Gooraza, in the Goodwadah Talook, the work here fell to some extent on account of the celebrated feast (Sunkorandy), and from thence I removed to Kykalore, a sub-division of the Goodwadah Talook, where much work was done. The Deputy Collector, Balakistnarow Guru, gave me every assistance necessary, and I succeeded in operating on the people in the Islands of the Colair Lake; my thanks are due to him. In the month of March I removed head-quarters to Gunnavarum, a sub-division of Bezwarah Talook, where opposition was met with in almost every village we visited, and inoculation extensively practised. In several villages my Vaccinators experienced demands for inoculation, and they tried to introduce vaccination instead, but failed; and here also the work fell. In April, May, and June my head-quarters was at Bezwarah. The weather during these three months was very hot, and almost all the Vaccinators, who were directed to work in other talooks, suffered from dysentery, fever, &c. In July the establishment was removed to Nundigama, in the Nundigama Talook. No village here was visited by a Vaccinator previously, and the villagers were quite ignorant of our operations. But though it was difficult to be introduced at first, the work done here was very fair. I sent to a village called Anagasagaram where some inoculators had recently operated, and on inquiry, I heard from the Village authorities that 178 persons were inoculated, while one of them died of it subsequently. I inspected every case except a few. Twenty were severely

attacked with the small-pox, five of whom were in a very dangerous state, and the remaining had a mild attack. I immediately brought this to the notice of the Officiating Collector, Kistna District, and requested him to punish the inoculators, when he replied that inoculation was not punishable under any law. If these, then, can be carried on with impunity, how can we carry on vaccination effectually? The people who dwell in the interior part of the district are very indifferent, and do not believe in the prophylactic agency of vaccination against small-pox, but in inoculation, which is extensively practised. In August I shifted head-quarters to Penakunchamapooloo, a large village in the Nundigama Talook. We daily visited two or three villages, and met with much opposition, as the people were totally ignorant of the benefits of vaccination; hence little work was done here. In this month I divided my staff into two batches, agreeably to Memorandum No. 745, dated 1st July 1869, from the Superintendent-General of Vaccination. I always visited these batches, but small numbers were obtained, due, I believe, to the ignorance of the people. Hitherto I was in the habit of visiting the villages with my whole staff; but I should mention, that I never had the whole staff on account of the frequent applications I received from Medical Officers who required the services of Vaccinators. The people of this village require vaccination only during the prevalence of small-pox. In the end of August I removed to Krosoor, in Suttanapully Talook, where the Tahsildar gave me no assistance; but the work was carried on pretty fairly. I brought the conduct of the Tahsildar to the notice of the Officiating Collector, who directed him to render me every necessary assistance; even then it was difficult to get good numbers. In November my head-quarters was shifted to Nursurowpett, in the Nursurowpett Talook. Here I found the Tahsildar, P. T. Ragavachaurloo Guru, who greatly interested himself in our work, and set a good example by getting his own child vaccinated. My thanks are due to him for the very efficient assistance he rendered us. In December we removed to Rajapett, where we did good work.

Small-pox prevailed during the year in the Talooks of Repully, Guntoor, Nundigama, Palnad, Bunder, and Nursurowpett. Applications were obtained from all the above-mentioned talooks, and I instantly directed my Assistants to those localities with ample supplies of lymph, when the disease was arrested to a great extent. The Vaccinator, R. Nursimooloo, No. 32, sent to Nursurowpett Talook, reported that a vaccinated case had an attack of small-pox on the sixth day after the operation. In this case small-pox was prevailing in and about the adjoining houses. It may, therefore, be clearly seen that at the time of operation small-pox was latent in the system of this child. The best suggestions that I can give for the effectual spread of vaccination are as follows:—

(*a*.)—Vaccination should be compulsory.

(*b*.)—Inoculation penal.

If these two acts be introduced, I have no doubt that vaccination will be attended with success, and many souls will be saved from the dire effects of small-pox. The Officiating Collector, J. A. C. Boswell, Esqurie, gave me every assistance, and my humble thanks are due to him. If other Divisional and Revenue Officers followed the example set by this gentleman, our work would command more success. I observed no irregularities in the progress of the vaccine disease nor any ill-effect resulting from vaccination.

The number vaccinated under one year of age was 1,422, of which 1,350 were successful and 72 unsuccessful. No case of small-pox after unmistakeable vaccination came under my notice. Amount of money expended as batta was Rupees 0-6-0. Twenty-three capillary tubes were charged with vaccine lymph and supplied to Medical and other Officers during the year. I pointed out the inconveniences experienced from the want of a peon for the district in my last Report. Cart-hire paid by me during the year for removing the records, &c., was 50 rupees. This is a great loss to me, and I beg of the Superintendent-General to recommend a small amount of money to cover cart-hire, &c., and also the services of a peon on a salary of 6 rupees per mensem to be attached to this district.

8.—KURNOOL DISTRICT.

Superintendent, Mir Nuzzer Ali.

Establishment, four 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,073-13-10.

Value of each case vaccinated, Rupees 0-14-7$\frac{1}{3}$.

Total number vaccinated during the year, 2,271.

Per-centage of success, 85·777.

This district comprises eight talooks, with an area of 7,470 square miles, and an estimated population of 7,70,857.

The itinerating season extends over nine months, and the recess includes the remaining three. Four talooks were inspected in the following manner:—In the first quarter of the year, a half of Ramalcotta and a half of Nundicotkoor Talooks were completed. As cholera broke out in the Ramalcotta Talook, the other half was not finished, and by the time the half of Nundicotkoor Talook was done, the recess commenced, and the staff was broken up. Each Vaccinator (eight in number) being posted to the cushbah town of each talook while the head-quarters was removed to the town of Kurnool. The sanctioned staff was never complete throughout the whole year, however, the Nundial Talook and about two-thirds of the Sirwell and Koilcontla Talooks were traversed, and several villages at Bigunpully, an independent Principality, near

450 square miles, were visited. There is an increase of 1,457 over the five months' incumbency during the year 1868.

There are many obstructions to the spread of vaccination, and one or two of great consequence are here described. The first and greatest is the unfortunate knowledge possessed by all, rich or poor, educated or illiterate, that vaccination is optional and not compulsory; 2nd, the obstruction due to religious prejudices, small-pox being worshipped under the designation "*Hummavaroo,*" and its approach and visit is a sort of enjoyment to the population; but when its ravages are great, they flee to the jungles, cursing themselves for their folly in not worshipping it sufficiently, and thus raising its present wrath. These prejudices are due to ignorance, and all disbelieve the efficacy of vaccination, and there is everywhere a tardiness to submit themselves to the operation.

3rd, the short stay of the staff and head-quarters in any locality is another evil towards its general adoption, as only a few can be operated on at a time, and we cannot afford a long stay to wait for any general rising in favour of vaccination, raised tardily perhaps by our united efforts in convincing both ignorant and educated of the benefits of vaccination. The Brahmins are the chief in refusing to be operated, and being generally influential as Village Officials, and educated, they command considerable attention, and while they openly pretend to favour it, they secretly strive to undermine its propagation so as not to ruin their priestly influence. They are the first to send away persons so as to shirk vaccination, to prove which, I would refer to the Register of Vaccination, where out of 2,000 cases scarcely twenty will be found to be Brahmins, and even these do so from necessity to obtain certificates to appear at the Uncovenanted Civil Service Examinations. The next opposing sect is the Mahomedans. These are so mixed up with the Hindus that they have adopted nearly all the manners and customs of the Hindus. To avoid vaccination they call out "*Gosha*" and pay no attention to what is explained to them; being so much against it as to prevent even the approach of a Vaccinator, attacking him on pretence of corrupting their "Gosha," and co-operating with the Brahmins to prosecute them for trespass. The remainder also object to it, among whom the "Commeties" discountenance it entirely, while the poor desert their homes and take refuge in fields, so as to avoid it, with the exception of the bolder few, who, at the instigation of the wealthy, prepare to attack the Vaccinators. Throughout the whole year, scarcely a month passed without having three or four cases of assault on Vaccinators. All could not be prosecuted for want of witnesses to prove the deed; six of them were brought before a Magistrate, when four were fined and imprisoned, one was severely reprimanded, and one is still under investigation.

Throughout the year the presence of small-pox was only once officially communicated, and immediate relief was despatched to the place, but to no purpose; for the people willingly suffered from the diseases rather than tolerate vaccination. Unless Legislative interference is put into action, I believe no material progress will result in this district. Although various plans have been adopted to explain the benefits of vaccination, no advantages have as yet been reaped; and, as the indifference of the people endangers not only their own lives, but those of the community at large, I think it highly desirable that a compulsory enactment should be adopted, and the paternal position of a Government is no where so strong as in the cause of vaccination, for when ignorant children refuse the beneficial influence of medicine, paternal authority should enforce its adoption.

No irregularities were noticed in the progress of vaccination; but a difficulty lies in the method of performing the operation, and by the time one arm is completed and another taken up, the vaccinated arm is wiped, so that the lymph inserted may have no effect on the system. When a case is unsuccessful, it is not re-vaccinated, and while the child is thus subject to an attack of small-pox, the parents and neighbours find opportunities to encourage its non-adoption.

I observed no ill-effects resulting from vaccination, but unfortunately should a death occur after vaccination—be the cause what it may—it is at once attributed to its deleterious influences.

About 343 subjects were vaccinated under one year of age, of whom 289 proved successful. Needles were the only vaccinating instruments used throughout.

The District Collector, T. A. N. Chase, Esquire, takes great interest in vaccination, and was always glad to render me every assistance. In February, at my request, he granted a general takeed calling on all the Tahsildars and Heads of Villages to explain to the people the benefits of vaccination, and to introduce the practice in their suburbs. In October he again published a Notice in the *District Gazette* that all Revenue Officers should assist the Vaccine Department, and try to persuade the people to avail themselves of the gratuitous blessings afforded them. In accordance with these instructions the District Officials did render me great assistance in front of me; but, seeing it was of little consequence, they suggested that a compulsory enactment was necessary. In February the District Collector himself witnessed the difficulties the department underwent in the discharge of its duties. Instances of small-pox after unmistakeable vaccination, or of any second attack of small-pox never came under my notice. The people of this district, though understanding the nature of small-pox, attribute any eruption to "*Hummavaroo.*"

It is respectfully submitted that the Vaccine Department, unlike

others, has its members unpaid for travelling expenses. The Educational, Police, Revenue Survey, Demarcation, Engineering, and other departments receive travelling allowance, and there is no greater travelling which they do that the Vaccine does not undergo, and yet the latter receive no travelling allowance. Any of the above department members are but posted in one station, and are to look after a certain limited portion in a district, whereas our department is neither located in a single place nor has it to look after any limited portion of the district, but moves through the whole.

It may be urged that the work of the department is very simple, merely to make six insertions; but they forget the number of six insertions that are to be made, and the attention to be paid to those six insertions for ten days, with or without success perhaps, and the anxiety to obtain lymph and subjects to be vaccinated. Add to this the greater amount of travelling to fish up every *he* and *she* from every nook and crook; then it will be seen that the work is neither easy nor agreeable, and the payment for the work itself is not over-remunerative, to which if the extra travelling expenses be added, the advantages will not appear very great. Besides these expenses, there is the duty to carry records, &c., of a regular establishment from place to place, and a person to communicate orders, &c., to different places (for we lack a peon). The head of this department in a district is the Superintendent, who is responsible for the whole department; and as its head, he is supposed to maintain a position in society equal to the rank he holds; but his small salary and the heavy travelling expenses incurred render his holding such a position quite out of the question.

9.—MADRAS DISTRICT.

Superintendent, Goolam Mowlah.

Establishment, four 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,415-6-1.

Value of each case vaccinated, Rupees 0-5-3.

Total number vaccinated during the year, 7,302.

Per-centage of success, 94·275.

This district comprises six talooks, with an area of 2,786 square miles, and an estimated population of 8,04,283.

I here beg to state that the work done has not been as satisfactory as was at first expected, though there was an increase of 5,568.

Many are still unprotected by vaccination; although I made the utmost endeavours to diffuse the blessings so freely offered by Government, and even seeking the co-operation of the local authorities to advance the scheme, I regret to state that great difficulties were experienced in

overcoming the prejudices, ignorance, and indifference with which the mass of the people regard vaccination. Often have I induced families to get vaccinated, but on the arrival of a Vaccinator, they put off the operation to a never-to-come convenient day.

Small-pox showed itself in the Town of Strepermatoor, and I was fortunate in suppressing the disease before it could spread to any extent, by vaccinating the unprotected who lived adjacent to the persons suffering from the disease. Great difficulties were experienced in inducing the people to get vaccinated. I am unable to describe the opposition met with. A panic seized the people : most of the Hindus stated that it was an established custom, whenever an epidemic of that nature seized the people, never to suffer their children to be operated on. All my efforts and persuasions to shake their superstitious resolution were useless. They said that they fully appreciated vaccination, and would gladly avail themselves of it when the epidemic ceased; but on its cessation, they said that their children were too young, and would wait till they grew up to get them vaccinated. Most of the ignorant people believe that small-pox is a visitation of one of the Deities, and as their Gooroos or Pundits encourage these superstitions, they object to vaccination from fear of incurring the displeasure of the Deity, lest it should bring on the disease in all its virulance and malignity. When the recess approached I made preparations to establish my head-quarters at Chingleput, and distributed the Vaccinators as usual over the district with instructions to keep up sufficient lymph in their respective stations. The localities where each had been posted were published in the *District Gazette.* During this season I frequently visited the Civil Surgeon and produced many vaccinated children for his inspection, who always pronounced the vesicles perfect. On the opening of the field season intimation of our movements was published in the local papers, inviting the people to take advantage of our appearance. The head-quarters was established at Madranticum. We here chiefly confined ourselves to the lower classes of the Hindus who can be prevailed upon to supply us with lymph-subjects for arm-to-arm operations. The Brahmins and other classes who are said to be enlightened among the Hindus were against vaccination. Only a few consented, and when operated on, objected to lymph being taken from them. The Tahsildar of this locality was good enough to furnish the Vaccinators with Takeeds requiring the Village Officials to render them assistance ; but these were useless, as many of the Native Officials themselves objected to our practice, stating that it gave much trouble to their children, causing fevers, &c. I removed to Atchervaukam next, where no great obstructions were met with, and many understood the benefits of vaccination. I was asked to send Vaccinators to several villages around where small-pox prevailed, which was principally confined to the lowest classes who inhabit close

and unhealthy parts of the village. I frequently visited such places and vaccinated many who lived contiguous to persons suffering from small-pox. The disease was introduced by a wandering gang of Coravers. I next went to Seyoor, where vaccination was pretty fairly received by the people, and from thence I went to Soonambut, a small Zemindary. The Zemindars assisted us, and many of the villagers were vaccinated. Most of the people here really appreciated our labours, and when the work was over, I went to Ponnery, where vaccination was not very freely adopted. All our endeavours failed, for the people are very ignorant and superstitious. I often lectured to them on the benefits of vaccination, and the people put me many interesting questions on that subject. The vesicles are frequently found in a state of ulceration from the application of a paste made from Neem leaves and turmeric, which they say is a practice handed down from time immemorial for small-pox, and they cannot be induced to give it up, as they believe that vaccination is a form of small-pox. Females are more difficult to deal with than males, and the encouragement of female education is necessary to break through much of the ignorance and superstition that now prevail among the Natives. The use of fresh arm lymph is more successful than any other kind ; but parents will not allow their children to be taken to other villages without receiving batta. Should the Village Officials make it their duty to encourage the parents to permit their children to accompany us, much will be gained for vaccination. From the want of a peon the office work is performed with the greatest difficulty, and I am often made to walk long distances to post letters. I most humbly beg that a peon be attached to each district on a salary of Rupees 6 per mensem. Besides the assistance he would render the Vaccinators in their work, he could attend to the menial duties of the office, and I most humbly beg that the subject be properly represented to Government to obtain the necessary permission.

MADRAS TOWN.

Superintendent, Loganathapermaul Doss.

Establishment, three 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,014-10-1.

Value of each case vaccinated, Rupees 0-5-10.

Total number vaccinated during the year, 5,484.

Per-centage of success, 88·183.

This town comprises four divisions, with an area of twenty-seven square miles, and an estimated population of 4,50,000.

From the following Tabular Statement it will be observed that there is a large decrease of 5,656 operations, chiefly occasioned by the late Superintendent, who was detected in falsifying Returns and was taken before a Magistrate and punished with simple imprisonment and a fine of Rupees 20, which led to the entire removal of the staff of Vaccinators

and the joining of others, which latter being new to the place, it took some time for them to settle down and work satisfactorily. A few sporadic cases of small-pox are said to have occurred here during the year. The number of cases vaccinated under one year of age was 1,079, of which 956 were successful:—

1868.			1869.				
No. vaccinated.	Successful.	Unsuccessful.	No. vaccinated.	Successful.	Unsuccessful.	Increase.	Decrease.
11,140	10,715	425	5,484	4,836	648	...	5,656

Vaccine Depot.

Superintendent, Loganathapermaul Doss, No. 679, Hospital Assistant.

Establishment, one 1st-class Vaccinator.

Cost of Establishment, Rupees 2,144-7-8.

Value of each case vaccinated, Rupees 0-7-8.

Total number vaccinated during the year, 4,472.

Per-centage of success, 95·281.

As shown in the following Tabular Statement, a decrease of 468 operations has occurred, owing to the entire change in the staff in consequence of the misconduct, imprisonment, and dismissal of the late Superintendent and some of the Vaccinators. I assumed charge of the Depôt on the 18th December 1869:—

1868.			1869.				
No. vaccinated.	Successful.	Unsuccessful.	No. vaccinated.	Successful.	Unsuccessful.	Increase.	Decrease.
4,940	4,615	325	4,472	4,261	211	...	468

The average number of persons vaccinated daily was 13·2, and there was an average daily issue of rice to 43·5 persons. On the whole 1,326 Mercalls and eight Seers were expended, amounting in value to Rupees 1,759-9-8. The number of charges of lymph supplied to Medical and other Officers is represented in the following Tabular Statement:—

Places.	Tube Lymph.	Lymph in Glass Plates.	Lymph in Ivory Points.
Regimental Hospitals... ...	64	19	18
Medical Officers	65	47	15
Civil Establishments	32	3	4
British Burmah	38	11	2

Eighty-nine subjects were sent out to supply vaccine lymph to Medical and other Officers during the past year. 422 Vaccination Certificates were granted to students going up to the Madras University and other Examinations.

The Vaccine Depôt building requires some slight repairs, more especially to the back verandah, the re-placement of the tiles of the roof, with general cleansing all over.

10.—MADURA DISTRICT.

Superintendent, M. Aroomoogam Pillay.

Establishment, five 1st-class and seven 2nd-class Vaccinators.

One 1st and one 2nd-class Vaccinators for special duty on the Pulney Hills.

Cost of Establishment, Rupees 2,444-9-7.

Value of each case vaccinated, Rupees 0-3-10.

Total number vaccinated during the year, 10,927.

Per-centage of success, 91·708.

This district comprises six talooks, with an area of 4,882 square miles, and an estimated population of 1,146,711.

I took charge of this district from O. Cundasawmy Reddiar on the 21st September. There were then two vacancies in the staff of Vaccinators. From the short charge I had I can give no large account of the work done throughout the year. I understand from the records that my predecessor had been working in portions of two or three talooks, and I began my work in Madura, Dindigul, Pereakolum, and a very small part of Theroomungalum Talooks. There was much rain during the year, and many were attacked with the fever, retarding our work to a great extent.

The Collector of the District kindly explained to the Village Munsiffs the benefits of vaccination, and this timely aid did us much good, for which, I beg to tender my thanks to that gentleman.

In several places some people refuse vaccination, saying they are bound by their caste not to get vaccinated, as such a deed will displease their gods. Thus they deliberately allow their children to be attacked by small-pox, although there is a preventative in vaccination. I am sorry there should be no systematic arrangement or rule compelling the people to get vaccinated. If this be arranged, there is every possibility that all the people would come under its protection. The people hate vaccination and create disturbances, thus discouraging and disheartening the staff, and I think that a Legislative enactment can alone remedy this evil.

11.—MALABAR DISTRICT.

Superintendent, P. Chendoo, officiating.

Establishment, four 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,391-1-0.

Value of each case vaccinated, Rupees 0-4-0.

Total number vaccinated during the year, 9,376.

Per-centage of success, 87·745.

This district comprises ten talooks, with an area of 6,258 square miles, and an estimated population of 1,845,803.

The following Return shows the number of operations performed during the year under review. Owing to the non-completion of the staff for more than ten months, the numbers vaccinated show a decrease :—

1868.	1869.	Decrease.
17,338	9,376	7,962

The whole of the staff was only employed in Malabar. Of the 9,376 operations, 8,227 proved successful, and 1,149 failed ; of the latter the result of 702 operations is not known. There are neither streets nor crowded houses in Malabar as in other districts. The houses being far from each other, great difficulty is experienced in conducting the vaccine operations. Although the Revenue Officers give strict orders to the Adhigaries of several Amshoms, no attention is paid nor interest taken in spreading vaccination. These can easily let the inhabitants of the several Amshoms know the real benefit of vaccination, if they can be persuaded to do so ; otherwise vaccination can make no very great progress in this district. During the year small-pox prevailed in the town of Tanner, of Ponany Talook, but it was immediately stopped by the exertions of the Vaccinators deputed forthwith to that place.

The number of subjects operated on under one year of age was 109. This small number is accounted for from the fact that the people of this district do not get their children of tender age vaccinated. Batta to the extent of eleven annas was expended to encourage subjects to accompany the Vaccinators to supply fresh lymph.

12.—NELLORE DISTRICT.

Superintendent, Mr. A Stewart.

Establishment, four 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,274-9-7.

Value of each case vaccinated, Rupees 0-2-7.

Total number vaccinated during the year, 13,789.

Per-centage of success, 97·947.

This district comprises nine talooks, with an area of 4,546 square miles, and an estimated population of 7,55,305.

Of the whole vaccinated, 13,505 were successful and 283 failed. Comparing the number vaccinated with that of the previous year, there is an increase of 8,156 operations.

I took charge of this district on the 22nd June, at Nellore, from 1st-class Vaccinator C.A. Ramasawmy, and it being then the recess period, I remained there till the 11th July, when I removed my head-quarters to Sulurpett Division in the Gudur Talook. In August I sent one Vaccinator to Minagolloo and the surrounding villages, where small-pox was then prevalent. In September the Tahsildar made another request to send a Vaccinator to Kotapully and its suburbs for the same purpose, which was complied with without delay. The Vaccinator employed at Minagolloo and its environs operated on 241 children, and the one in Khotapully vaccinated seventy-two. These two Vaccinators are at present working in Korathoor and Kothapallium respectively, where small-pox exists. This disease also prevailed to a certain extent in several of the villages of Nellore Talook. Three cases of small-pox after successful vaccination came under my notice, of which one child died thirteen days after the operation. The obstructions to the spread of vaccination may be summed up in a few words, viz., obstinacy, indifference, ignorance, and carelessness. The lymph has kept good throughout the year. No money was given as batta to mothers of children who have supplied fresh vaccine lymph. I have much pleasure in recording my great satisfaction with the conduct of all the Vaccinators working with me: they are willing and hardworking men. Owing to the short time that I have held charge of this district, I am unable to give a full account of the vaccination carried on in it. I am constantly travelling, and inspect each village as I go, stimulating the people to concur in our opinion, and to see for themselves the prophylactic properties of vaccination.

13.—NORTH ARCOT DISTRICT.

Superintendent, C. Seetharamiah.

Establishment, four 1st-class and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,190-4-9.

Value of each case vaccinated, Rupees 0-2-4.

Total number vaccinated during the year, 14,869.

Per-centage of success, 95·406.

This district comprises nine talooks, with an area of 3,959 square miles, and an estimated population of 1,181,807. I took charge of this office last April, at the commencement of the recess, consequently my

report cannot comprise all the particulars that have taken place throughout the year. When the recess was over, I shifted head-quarters from place to place, inspecting the work of the Vaccinators. During my charge the staff varied from five to nine in number, thus it was never complete, the sanctioned number for each district being eleven. On my tour I observed that the Natives, and especially those of the agricultural classes residing in the borders of the jungle tracts, never avail themselves of the advantages of vaccination, and make frivolous excuses to shirk it, although they are subject to frequent attacks of small-pox on account of their insalubrious climate. From personal inquiries which I made while itinerating, I found that small-pox was prevalent in many of the villages, though the mortality was not great.

The number of subjects vaccinated under one year was 2,720.

No instances of small-pox after successful vaccination came under my notice during my incumbency both in the Vizagapatam and North Arcot Districts.

The conduct of the Vaccinators on the whole was good. I personally witnessed the good temper and firmness with which they met the rude repulses of the ryots.

The lymph has remained good during the year. On my arrival here, I found none of the Zemindars, except that of Poonganoor, employing a Vaccinator for his Estate, and it is with great pleasure that I report that the Zemindars of Carvettinugger and Bungaroopalim (minor Zemindaries) consented to employ one Vaccinator each on their respective Estates on salaries of Rupees 10 per mensem. The Jaghiredar of Arnee is the only one who does not employ a Vaccinator on his Estate at his own cost. The present system of conducting operations will best attract the attention of the people to the benefits derivable from Vaccination, and give them the greatest interest in its extension.

14.—SALEM DISTRICT.

Superintendent, Syed Abdul Aziz.

Establishment, five 1st-class and seven 2nd-class Vaccinators. One 1st-class Vaccinator for special employ on the Shervaroy Hills.

Cost of Establishment, Rupees 2,661-4-1.

Value of each case vaccinated, Rupees 0-6-1.

Total number vaccinated during the year, 9,685.

Per-centage of success, 90·583.

This district comprises nine talooks, with an area of 7,604 square miles, and an estimated population of 1,619,233.

Comparing the number of operations of this year with that of the last, there has been a decrease of 7,386 cases, for which no explanation was given by my predecessor. As I assumed charge in November 1869, I think that the decrease was due to the numbers of the previous year including the work in a larger portion of land under the old system of Circles, and in the loss of time in training the new Vaccinators, as many transfers and dismissals occurred during the year. The opposition to vaccination is here due to religious prejudices, misapprehensions, and fear or indifference on the part of the villagers in refusing vaccination. These hindrances can only be overcome by the patience and perseverance of Vaccinators in explaining to the people the benefits of vaccination. Vaccination should also be made compulsory as in England; as most of the people are well aware of the blessings of vaccination, but are still indifferent to its advantages. Having observed the troubles and inconveniences of the staff, I would beg to suggest a small increase in the salaries of the 2nd-class Vaccinators.

Nothing irregular was observed in the progress of the vaccine disease, and no ill-effects resulted from vaccination. 2,175 subjects under one year of age were vaccinated, of which 1,992 were successful. There were no instances of small-pox after unmistakeable vaccination. The conduct of the staff, on the whole, was good.

15.—SOUTH ARCOT DISTRICT.

Superintendent, M. Ramasawmy, No. 521, Hospital Assistant.

Establishment, four 1st and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,426-12-5.

Value of each case vaccinated, Rupees 0-2-6.

Total number vaccinated during the year, 15,064.

Per-centage of success, 91·390.

This district comprises eight talooks, with an area of 4,779 square miles, and an estimated population of 1,222,803.

The total number vaccinated during the year was 15,064, of which 13,767 were successful. Vaccination has been carried on satisfactorily in this district, and the lymph was good throughout, the vesicles being good and of normal size. The cicatrices were usually large, and when the scab dropped off at the usual period, a depressed mark was left. Obstructions to vaccination vary at different parts of the district, besides the general ones about custom, caste, and religious prejudices. Arm-to-arm operations are difficult to be carried on to any great extent, as the people refuse the lymph from the arms of their children, and to take this is one of the most important duties of a Vaccinator, and also unpleasant, as he is sadly abused

for his pains. It is therefore absolutely necessary that the giving of a small quantity of lymph from successful subjects should be made legal. In places, far removed from cusbah stations, the people do not and will not understand the benefits of vaccination. Observation and inquiry on their part, and unflagging zeal on the part of the staff will ere long induce its general adoption. In Hill Tracts it appears that inoculation is practised. When the Vaccinators go there the people decline undergoing the operation, fearing that small-pox will prevail if it be adopted. They are not in a position to understand the difference between vaccination and inoculation, even when it is explained to them. Last March, at the request of the Collector, I visited a few villages and sent some Vaccinators towards the Hill Tracts of Trinomalay Talook. Our efforts there were of little use. One of these Vaccinators ascertained from local inquiry and informed me that inoculation was generally practised in these parts. It appears that some had been inoculated a few months previous, and the people finding that the epidemic raged, fled to the hills, to which they also repaired when vaccination was attempted. These circumstances were reported to the Collector. A sporadic small-pox prevailed, but the mortality was not great when compared with that of the previous year. In January, March, and April I was informed by the Sub-Collector, the Tahsildar of Tindevanum, and a Police Inspector that small-pox was prevailing in the Villages of Paroomookal, Porto Novo, and Valoothavoor, to which places Vaccinators were sent to check the disease. The subjoined Statement, prepared with reference to the Returns of Deaths published monthly in the *District Gazette*, shows the deaths from small-pox in each of the talooks during 1868 and 1869. In the former year the total number of deaths from small-pox was 1,463, and in 1869 it was 737, a reduction of 50·3 per cent. It will be observed that there has been a marked improvement in the Talooks of Tindevanum, Trinomalay, Veloopooram, and Trickaloor.

Talooks.	Deaths.	
	1868.	1869.
Tindevanum... ...	389	85
Trinomalay... ...	135	61
Veloopooram.. ...	255	126
Trickaloor... ...	152	33
	931	305

The comparison is shown in the tabular form, and the fall in the mortality is more than 32·7 per cent. The above talooks were the principal fields of operation during the year, and my attention having been drawn from the large number of deaths from small-pox during 1868, I am glad that my attention has been rewarded with such success.

Mortuary Register of Small-pox in the years 1868 *and* 1869, *taken from the "District Gazette."*

Talooks.	1868.													1869.												
Tindevanam ...	28	23	41	47	28	20	38	54	37	38	15	20	389	21	9	5	6	10	2	13	9	2	...	1	7	85
Trinomalay ...	21	10	7	...	26	2	21	8	21	6	4	9	135	3	1	6	...	12	5	8	5	3	9	4	5	61
Veloopooram ...	12	10	28	19	28	7	48	18	22	18	22	23	255	21	7	15	15	7	6	8	9	3	15	10	10	126
Trickaloor ...	25	11	8	4	7	4	25	9	21	6	16	16	152	2	...	1	1	1	8	...	10	2	3	2	3	33
Kullacoorchee .	24	6	1	11	4	6	2	7	8	5	4	12	90	1	9	...	4	...	3	9	8	1	...	8	4	47
Virdachellum...	10	2	10	30	3	1	5	...	...	6	5	8	80	1	1	6	18	5	5	7	13	7	13	9	7	92
Chedumbarum.	19	47	21	31	24	23	22	33	28	9	10	4	271	5	5	18	14	9	8	23	5	17	8	25	12	149
Cuddalore ...	12	1	3	6	3	8	11	9	4	6	12	16	91	13	4	6	6	3	15	13	18	14	21	19	12	144
Total ...	151	110	119	148	123	71	172	138	141	94	88	108	1,463	67	36	57	64	47	52	81	77	49	69	78	60	737

As the Return of deaths for December 1869 has not come to hand, the numbers given are the average calculated on the mortality of the previous eleven months. No irregularities were observed in the progress of the vaccine disease, nor ill-effects resulting from vaccination. Instances of small-pox after unmistakeable vaccination, or vaccination on well marked cases of previous small-pox, have not occurred. At the commencement of the year the Vaccinators were working ten miles distant from cusbah Tindevanum, we then removed to Gingee, and stayed there till the end of February. In the beginning of March we commenced operations in the Trinomalay Talook, and remained there till the close of the month. Then followed the recess, when the head-quarters was established at Cuddalore, and the Vaccinators were divided into batches of two or three each and posted to Cuddalore, Chedumbarum, Veloopooram, and Trickaloor Talooks. At the commencement of the field season we began work on a different system. The Vaccinators were divided into batches, as during the recess, and posted to several large villages in the same or in two or three adjoining talooks. The head-quarters was occasionally removed to a central spot and within easy distances from each group. The Vaccinators were ordered to work simultaneously at Cuddalore, Ponugeebandy, Tenedy, Veloopooram, Vanoor, and Vikravandy, and the head-quarters was successively removed to these places. I next went to Trickaloor, Trimunainellore, Elavanasore, Oolundoorpette, and latterly to Kullacoorchee, where we removed till the beginning of December, and then proceeded to Virdachellum, the batches being made to work there and Chedumbarum, Kullacoorchee, where we are now working. I visited 200 villages where children had been, and were being vaccinated, having thus travelled over 1,303 miles and inspected 1,548 successful operations. My supervision was not so extensive as I could wish, my time being fully occupied with keeping up correspondence, copying letters, carrying them to the Post Office, making covers, &c., from lacking a peon. I am of opinion that a peon is much needed ; for, half of the work taken up by his duties will be thus saved, and better work will be done in

every way, both in the supervision and in the attention of the minor things above-mentioned.

In conclusion I beg to offer my thanks to C. Sri Baliah, Deputy Collector, to whom I am greatly indebted for the valuable assistance he rendered in the cause of vaccination—losing no opportunity in drawing the attention of the people to the grave mistake in slipping the gratuitous opportunities afforded by vaccination.

16.—SOUTH CANARA DISTRICT.

Superintendent, P. A. Mausilla Pillay, No. 714, Hospital Assistant.

Establishment, five 1st-class and seven 2nd-class Vaccinators.

One 1st-class Vaccinator for special employ in the Amindivi Islands.

Cost of Establishment, Rupees 2,605-4-2.

Value of each case vaccinated, Rupees 0-4-8.

Total number vaccinated during the year, 8,888.

Per-centage of success, 96·399.

This district comprises five talooks, with an area of 4,206 square miles, and an estimated population of 8,39,688.

During this year there has been an increase of 5,157 operations.

The lymph has been good, but we labour under an insufficient supply. I may say with truth that this is the only obstacle in the way of an extensive spread of vaccination in this district worth paying attention to. In my humble opinion nothing short of Legislative interference on the part of authorities can meet and overcome this difficulty. The intelligent, well-to-do classes are much in our way, and they all receive the benefits of vaccination as a matter of right without incurring, in the majority of instances, a farthing's expense, and in return, they not only disallow any virus to be taken from the arms of the children, but very often prevent our taking lymph from the arms of the children belonging to their servants or poorer relations. How long, under the present circumstances, the department will be able to cope successfully in spite of this difficulty, it would be vain for me to say. As a matter of fact, the poorer classes have long entertained the belief that the Government permits the forcible taking of lymph from a successfully vaccinated child, and it is this belief that enables us to obtain fresh lymph, which delusion, if once dispelled, will, I need not say, bring vaccination to a stand-still, and it is only a question of time for the poor to follow the example of the rich, while to argue with them is useless, for they will not be convinced of the necessity of supplying lymph and of the harm-

lessness of the operation ; nor are they at all to blame for this, seeing that the educated and intelligent also object to it. It is absolutely necessary to make this legal, and it cannot be done too soon. The present system of itineration affords the best opportunities for a fair spread of vaccination and its being impressed on the people; for reports of our visits are carried far and wide, to enable those who are willing to undergo the operation, besides having the advantage of a better supervision. 198 children under one year of age were vaccinated. A strong repugnance to get children operated on exists here. No case of small-pox after successful vaccination has come under my notice.

The conduct of the staff, on the whole, was good. To encourage parents to accompany the Vaccinators with their children, batta to the amount of Rupees 4-1-6 was given. This enabled us to keep up a constant supply of lymph, for arm-to-arm operations are invariably attended with success. The instrument in use is the needle.

17.—TANJORE DISTRICT.

Superintendent, C. Aroomoogum Chetty.

Establishment, four 1st and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,373-1-0.

Value of each case vaccinated, Rupees 0-2-9.

Total number vaccinated during the year, 13,650.

Per-centage of success, 97·992.

This district comprises nine talooks, with an area of 3,735 square miles, and an estimated population of 1,731,703.

It will be observed that there has been a decrease of 8,095 operations, this was due to the following causes:—1st, the last year's Report comprised the work of twenty-one Vaccinators, whilst this embraces the work of fifteen; 2nd, there were several changes in the staff from deaths, resignations, transfers, and constant vacancies for more than half the year, as will be seen from the several monthly Returns; that the results were very bad compared with those of the five preceding months, when the staff was complete. I have nothing to notice besides the obstructions recorded in my last year's Report; but they have gradually subsided in most parts of the district, by patiently explaining its benefits and then observing it themselves. I heard of no small-pox in this district. Under the present organization of the department, and from my experience in it, my belief is, that vaccination should be compulsory. I noticed no irregularities in the progress of the vaccine

discase, nor ill-effects resulting from vaccination. Thc number of subjects vaccinated under one year of age was 1,754. No instanccs of small-pox after unmistakeable vaccination, or aftcr well-marked cases of previous small-pox, came under my observation. The lymph was good throughout the year. It never failed in any locality either from atmospheric or climatic influences; but I am doubtful whether in future it will not gradually lose its present character, if the practice of giving batta to mothers be discontinued, as in some cases it is very hard to get vaccinated children to follow us to distant villages, and whcnever the head-quarters is changed we are unable to carry on arm-to-arm operations. The conduct of the Vaccinators has been generally good; they have been willing, hardworking, and active in the discharge of their duties, and manifested a desire to obey me, and to give every satisfaction. It is hard on the Vaccinators, and especially those of the 2nd class, to vegetate on 10 rupees, besides paying their travelling expenses.

18.—TINNEVELLY DISTRICT.

Superintendcnt, O. Cundasawmy Reddi.

Establishment, four 1st and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,313-7-7.

Value of each case vaccinated, Rupees 0-4-1.

Total number vaccinated during the year, 8,851.

Per-centage of success, 89·910.

This district comprises nine talooks, with an area of 3,810 square miles, and an estimated population of 15,18,489.

There is an increase of 1,371 operations. Prejudice against vaccination generally exists in this district through gross superstition and ignorance, but partly by good advice and soft persuasions and partly by the intercst taken by the Tahsildars and Deputy Tahsildars, as well as by the assistancc rendered by the Village authorities it has been overcomc. The Talook of Ambasamoodrum is very large, having formerly consisted of two talooks; on this account, and from its largc villages, it took a longcr time to finish the work here; and even then there were but few who appreciated it and wcre opcratcd on. In conducting vaccination I experienced much resistancc from thc "Lubbays," who say that vaccination is contrary to thcir religion. A case of resistancc took place at Mulapalayam, where I was not present when the opposition was offered. This was overcome by the aid of the District Magistrate and Villagc Munsiff. The latter is an encrgetic official, and his timcly aid was of much

assistance to the cause of vaccination. It will be well if they adopt strict measures. Small-pox was prevalent in the Talooks of Tenkasee, Tenkara, and Satoor, to which places Vaccinators were sent. The cause of vaccination would be greatly promoted if a treatise on that subject be printed in the Vernaculars of the district and distributed, while inoculation by matter taken from small-pox should be rendered penal. No irregularities in the vaccine disease were observed, nor have any ill-effects arisen from vaccination in this district. The number of subjects vaccinated under one year was 1,351. With the exception of the Vaccinators who have just joined, the conduct of the staff was good; the Vaccinators being regular and hardworking in the discharge of their duties.

19.—TRICHINOPOLY DISTRICT.

Superintendent, Mr. E. J. Good.

Establishment, four 1st and seven 2nd-class Vaccinators.

Cost of Establishment, Rupees 2,385-14-11.

Cost of each case vaccinated, Rupees 0-4-11.

Total number vaccinated during the year, 7,668.

Per-centage of success, 95·813.

This district consists of five talooks, with an area of 3,565 square miles, and an estimated population of 1,006,826.

I am sorry I cannot contrast this Return with the preceding one, which embodied the operations of only four months, being the time from which I took charge. In January I and my staff began work in the Trichinopoly Talook. In May an additional 2nd-class Vaccinator gave me my full complement of eleven Vaccinators, till the end of August when it was reduced to nine, and subsequently to eight. I stayed three months in the Trichinopoly Talook and then proceeded to Kulitalay, Moosery, Perambalore, Laulgoody, and Woodiarpallium, into which the staff was distributed during the recess. On beginning work in July, the Trichinopoly Talook was again taken up, and in October we went to Woodiarpallium, where we worked till the close of the year.

No money was expended as batta to mothers for supplying lymph. I am not aware of the existence of any hinderance to the spread of vaccination, but I found that most of the people we dealt with were apathetic and ignorant of its advantages, owing probably to the absence of small-pox for some years in this district. The intelligent, well-to-do class of Natives receive it freely, but object to lymph being taken from the arms of their children or poor neighbours. This is a great obstacle to cope with, as it

interferes very seriously with the daily keeping up of vaccination. The people are often too ignorant to impress on them the advantages to be derived from it, and whilst the village heads are eager to render every assistance, such good intentions are frustrated by the indifference of the people. What is now performed is permitted under the belief that it is the desire of Government, and that it cannot be avoided. I am therefore of opinion that nothing short of Legislative interference can overcome this difficulty, and much of the time, which is now spent in coaxing the people, would be thereby saved. The prevalence of small-pox in this district has not been great; there have been but few cases confined only to two talooks, Moosery and Woodiarpallium. I would beg to suggest the appointment of peons to the department, chiefly with the view of aiding the Vaccinators in procuring children from the different villages. I think this deserves special attention, and will be glad to see it meet with approval. No ill-effects nor irregularities were observed during the progress of the vaccine disease. The number of subjects vaccinated under one year of age was 1,224. No instances of small-pox after successful vaccination, or vaccination on previous small-pox, came under my notice. Cholera prevailed with some severity during October, November, and December, and the mortality from its effects was great.

20.—VIZAGAPATAM DISTRICT.

Superintendent, Chinnasawmy Pillay.
Establishment, four 1st and seven 2nd-class Vaccinators.
Cost of Establishment, Rupees 2,351-9-6.
Value of each case vaccinated, Rupees 0-9-2.
Total number vaccinated during the year, 4,075.
Per-centage of success, 84·934.

The district comprises three talooks, with an area of 3,622 square miles, and an estimated population of 3,16,804.

The Return shows an increase of 3,043 cases. I and my staff have completed the work in many parts of Sarvasidi, Golcondah, Nursipatam, Condakula, Copimcotah, Varatcla, Anakapully, Nuckapully, Godichule, Coppaka, Gidatoor, Paikarapita, Royavarum, Yellamanchilli, Byarum, and Vizagapatam Talooks. The greatest obstruction was met with in Nuckapully and its suburbs, which was overcome by the kind assistance of H. Sewell, Esquire, Principal Assistant Collector, and by the Magistrates of Sarvasidi and Golcondah Talooks, who cautioned and issued strict takeeds to the heads of the villages to promote vaccination. In several of the villages of Nuckapully the people refused the operation, though

the advantages were explained to them. The villagers were rude, obstinate, and ignorant. The Principal Assistant Collecter gave me every assistance, and if we received the same support from the other officials of the district, little opposition would have been offered. Small-pox has scarcely been known during the year in this district, except in the Nursipatam and Golcondah Talooks, where vaccination arrested it, and the people were well pleased and satisfied with the results. I humbly beg to suggest that, for its effectual spread, vaccination should be made compulsory as in Europe. In the month of May 1869, during the recess, two deaths were reported as having resulted from vaccination; but they died from diarrhœa and febris intermittans at Bodapully and Varatta. The number of subjects operated on under one year of age was 577, and I regret to state that I had great difficulty in securing infants to be operated on. The virus is good, and supplies are always at command throughout the year, and will be supplied to officers on requisition.

ZEMINDARY TRACTS.

VIZAGAPATAM DISTRICT.

Superintendent, N. Balasoondrum, No. 645, Hospital Assistant.
Establishment, six 1st-class Vaccinators.
Cost of Establishment, Rupees 3,113-10-0.
Value of each case vaccinated, Rupees 1-3-7.
Total number vaccinated during the year, 2,539.
Per-centage of success, 92·004.

These tracts are undefined, and the amount of population is not known. I beg to report that, although several attempts were made to render vaccination popular, I have met with great difficulties and disappointments in overcoming their projudices and in obtaining subjects for operation. They are afraid of it, and their determined ignorance prevents all instruction. When Vaccinators approach, they flee to the hills till they are gone, still, we were tolerably successful, and there is an increase of 6,610 operations. The custom and ignorance of the peoplo are our chief obstacles, and the want of interest in the Sub-Magistrates adds to the difficulties contended against. The Magistrate was requested to direct the Sub-Magistrates to give every assistance to the Vaccinators by sending to the heads of villages where we were, and asking them to persuade the people to get vaccinated. This was sanctioned and published in the *District Gazette*, dated 22nd May 1869. Small-pox was

prevalent in many villages of Royaghada Talook in April and May, and on our arrival few had escaped its visit; the unprotected were vaccinated. To carry on vaccination more satisfactorily, and to make it more agreeable to the people, I beg to suggest that inoculation be rendered penal and vaccination compulsory. No irregularities were noticed during the progress of the vaccine disease. 1,043 cases under one year of age were vaccinated, of which 916 were successful. No cases of small-pox after successful vaccination, or vaccination on well marked cases of previous small-pox, have occurred. The conduct of both the Zemindary and Government Vaccinators was good.

JOHN SHORTT, M.D., Surgeon,
Supt.-General of Vaccination,
Madras Presidency.

Annual Return of Vaccination of the different Districts of the Madras Presidency for the year 1869.

DISTRICTS.	UNDER ONE YEAR OF AGE.											
	Europeans and East Indians.		Natives.				Total.		Result of Operations.		Compared with the previous Return.	
			Hindus.		Mahomedans.							
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Successful.	Unsuccessful.	Increase.	Decrease.
Madras Town	92	77	430	397	43	40	565	514	956	123	...	1,510
Madras District	14	8	359	368	27	19	400	395	762	33	616	...
South Arcot	...	...	487	473	23	30	510	503	939	74	429	...
North Arcot	3	...	1,332	1,111	174	100	1,509	1,211	2,605	115	1,475	...
Tanjore	...	...	850	827	38	39	888	866	1,723	31	...	1,020
Trichinopoly	...	...	541	640	24	19	565	659	1,195	29	792	...
Madura	...	...	1,272	1,141	38	35	1,310	1,176	2,284	202	1,075	...
Tinnevelly	...	...	685	697	12	7	647	704	1,230	121	482	...
Godavery	1	...	210	238	1	3	212	241	397	56	101	...
Kistna	...	...	686	673	28	35	714	708	1,350	72	776	...
Ganjam	...	1	103	109	1	...	104	110	201	13	132	...
Vizagapatam	1	...	281	293	2	3	284	296	487	93	445	...

Kurnool	...	1	143	128	34	37	177	166	289	54	186	...
Bellary	2	...	1,557	1,527	244	212	1,803	1,739	3,111	431	30	...
Cuddapah	1	1	87	105	15	11	103	117	206	14	...	325
Nellore	...	...	371	307	8	12	379	319	685	13	534	...
Coimbatore	15	1	1,491	1,607	28	10	1,529	1,618	2,799	348	...	1,569
Salem	5	6	1,060	1,039	39	26	1,104	1,071	1,992	183	...	1,201
Malabar	3	5	45	22	19	15	67	42	96	13	...	174
South Canara	6	3	70	73	21	25	97	101	190	8	90	...
Ganjam, Hill Tracts of Orissa...	3	...	65	46	1	2	69	48	96	21	...	122
Vizagapatam, Jeypore ...	...	...	102	80	...	...	102	80	169	13	170	...
Total...	146	103	12,177	11,901	815	680	13,138	12,684	23,762	2,060	7,333	5,921
Vaccine Depôt, Madras ...	8	8	348	410	10	14	366	432	755	43	...	238
Cantonment of Bangalore ...	30	25	116	98	83	51	229	174	397	6	...	441
Do. of Secunderabad ...	70	37	947	545	124	77	1,141	659	1,359	441	776	...
Do. of Kamptee ...	6	4	116	79	57	50	179	133	293	19	...	394
Total...	114	74	1,527	1,132	274	192	1,915	1,398	2,804	509	776	1,073
General Total...	260	177	13,704	13,033	1,089	872	15,053	14,082	26,566	2,569	8,109	6,994

Annual Return of Vaccination of the different Districts of the Madras Presidency for the year 1869.—(Continued.)

DISTRICTS.	ABOVE ONE YEAR OF AGE.											
	Europeans and East Indians.		Natives.				Total.		Result of Operations.		Compared with the previous Return.	
			Hindus.		Mahomedans.							
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Successful.	Unsuccessful.	Increase.	Decrease.
Madras Town	174	174	2,191	1,586	173	107	2,538	1,867	3,880	525	...	4,146
Madras District	30	22	3,455	2,787	123	90	3,608	2,899	6,122	385	4,952	...
South Arcot	1	1	7,323	6,181	299	246	7,623	6,428	12,828	1,223	8,460	...
North Arcot	5	1	6,665	4,735	455	288	7,125	5,024	11,581	568	5,002	...
Tanjore	...	...	5,990	5,484	237	185	6,227	5,669	11,653	243	...	7,075
Trichinopoly	...	1	3,346	2,941	85	71	3,431	3,013	6,152	292	4,490	...
Madura	...	...	4,591	3,610	140	100	4,731	3,710	7,737	704	...	455
Tinnevelly	1	...	4,123	3,258	76	42	4,200	3,300	6,728	772	889	...
Godavery	7	2	4,870	4,225	36	10	4,913	4,237	7,736	1,414	...	5,084
Kistna	14	2	4,429	4,019	249	188	4,692	4,209	8,498	403	...	740
Ganjam	8	...	1,780	1,302	21	3	1,809	1,305	2,605	509	1,950	...
Vizagapatam	...	1	1,741	1,721	20	12	1,761	1,734	3,074	421	2,598	...

Kurnool	2	...	995	637	170	124	1,167	761	1,659	269	1,271	...
Bellary	2	2	3,202	2,578	499	345	3,703	2,925	5,462	1,166	...	2,184
Cuddapah	1	...	1,683	1,322	207	163	1,891	1,485	3,072	304	...	1,648
Nellore	...	...	6,845	5,910	194	142	7,039	6,052	12,821	270	10,136	...
Coimbatore	6	6	5,298	4,970	60	28	5,364	5,004	9,076	1,292	...	3,126
Salem	5	5	3,950	3,388	92	70	4,047	3,463	6,781	729	...	6,185
Malabar	53	15	5,053	1,310	2,413	423	7,519	1,748	8,131	1,136	...	7,788
South Canara	119	87	4,392	2,812	735	545	5,246	3,444	8,379	311	5,067	...
Ganjam, Hill Tracts of Orissa...	15	5	1,613	857	23	2	1,651	864	2,121	394	...	4,011
Vizagapatam, Jeypore ...	...	...	1,163	1,194	...	...	1,163	1,194	2,167	190	1,915	...
Total ...	443	324	84,698	66,827	6,307	3,184	91,448	70,335	148,263	13,520	46,730	42,442
Vaccine Depôt, Madras ...	23	31	1,039	2,497	47	37	1,109	2,565	3,506	168	...	230
Cantonment of Bangalore ...	20	21	448	314	175	125	643	460	1,039	64	...	1,827
Do. of Secunderabad...	44	17	260	115	21	17	325	149	255	219	...	1,128
Do. of Kamptee ...	1	5	141	84	45	49	187	138	295	30	19	...
Total ...	88	74	1,888	3,010	288	228	2,264	3,312	5,095	481	19	3,185
General Total ...	531	398	86,586	69,857	6,595	3,412	93,712	73,647	153,358	14,001	46,749	45,627

Annual Return of Vaccination of the different Districts of the Madras Presidency for the year 1869.—(Concluded.)

DISTRICTS.	GENERAL TOTAL.											
	Europeans and East Indians.		Natives.				All Classes.		Successful.	Unsuccessful.	General Total of Males and Females.	Ratio per cent. of Success.
			Hindus.		Mahomedans.							
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.				
Madras Town...	266	251	2,621	1,983	216	147	3,103	2,381	4,836	648	5,484	88·183
Madras District	44	30	3,814	3,155	150	109	4,008	3,294	6,884	418	7,302	94·275
South Arcot	1	1	7,810	6,654	322	276	8,133	6,931	13,767	1,297	15,064	91·390
North Arcot	8	1	7,997	5,846	629	388	8,634	6,235	14,186	683	14,869	95·406
Tanjore	...	...	6,840	6,311	275	224	7,115	6,535	13,376	274	13,650	97·992
Trichinopoly	...	1	3,887	3,581	109	90	3,996	3,672	7,347	321	7,668	95·813
Madura	...	...	5,863	4,751	178	135	6,041	4,886	10,021	906	10,927	91·708
Tinnevelly	1	...	4,758	3,955	88	49	4,847	4,004	7,958	893	8,851	89·910
Godavery	8	2	5,080	4,463	37	13	5,125	4,478	8,133	1,470	9,603	84·692
Kistna	14	2	5,115	4,692	277	223	5,406	4,917	9,848	475	10,323	95·398
Ganjam	8	1	1,883	1,411	22	3	1,913	1,415	2,806	522	3,328	84·314
Vizagapatam	1	1	2,022	2,014	22	15	2,045	2,030	3,561	514	4,075	84·934

Kurnool	2	1	1,138	765	204	161	1,344	927	1,948	323	2,271	85·777
Bellary	4	2	4,759	4,105	743	557	5,506	4,664	8,573	1,597	10,170	84·296
Cuddapah	2	1	1,770	1,427	222	174	1,994	1,602	3,278	318	3,596	91·129
Nellore	...	...	7,216	6,217	202	154	7,418	6,371	13,506	283	13,789	97·947
Coimbatore	21	7	6,789	6,577	83	38	6,893	6,622	11,875	1,640	13,515	87·865
Salem	10	11	5,010	4,427	131	96	5,151	4,534	8,773	912	9,685	90·583
Malabar	56	20	5,098	1,332	2,432	438	7,586	1,790	8,227	1,149	9,376	87·745
South Canara	125	90	4,462	2,885	756	570	5,343	3,545	8,569	319	8,888	96·399
Ganjam, Hill Tracts of Orissa	18	5	1,678	903	24	4	1,720	912	2,217	415	2,632	84·234
Vizagapatam, Jeypore ...	...	...	1,265	1,274	...	...	1,265	1,274	2,336	203	2,539	92·004
Total...	589	427	96,875	78,728	7,122	3,864	104,586	83,019	172,025	15,580	187,605	91·695
Vaccine Depôt, Madras ...	31	39	1,387	2,907	57	51	1,475	2,997	4,261	211	4,472	95·281
Cantonment of Bangalore..	50	46	564	412	258	176	872	634	1,436	70	1,506	95·351
Do. of Secunderabad.	114	54	1,207	660	145	94	1,466	808	1,614	660	2,274	70·976
Do. of Kamptee ...	7	9	257	163	102	99	366	271	588	49	637	92·307
Total...	202	148	3,415	4,142	562	420	4,179	4,710	7,899	990	8,889	88·862
General Total...	791	575	100,290	82,870	7,684	4,284	108,765	87,729	179,924	16,570	196,494	91·567

TABLE OF AGES.

Return of Vaccination during the year 1869, showing the number below and above one year of age.

Districts.	Age.		Difference.		Total number vaccinated.
	Under one year.	Above one year.	Under.	Above.	
Madras Town	1,079	4,405	...	3,326	5,484
Madras District	795	6,507	...	5,712	7,302
South Arcot...	1,013	14,051	...	13,038	15,064
North Arcot...	2,720	12,149	...	9,429	14,869
Tanjore	1,754	11,896	...	10,142	13,650
Trichinopoly	1,224	6,444	...	5,220	7,668
Madura	2,486	8,441	...	5,955	10,927
Tinnevelly	1,351	7,500	...	6,149	8,851
Godavery	453	9,150	...	8,697	9,603
Kistna	1,422	8,901	...	7,579	10,323
Ganjam	214	3,114	...	2,900	3,328
Vizagapatam	580	3,495	...	2,915	4,075
Kurnool	343	1,928	...	1,585	2,271
Bellary	3,542	6,628	...	3,086	10,170
Cuddapah	220	3,376	...	3,156	3,596
Nellore	698	13,091	...	12,393	13,789
Coimbatore	3,147	10,368	...	7,221	13,515
Salem	2,175	7,510	...	5,335	9,685
Malabar	109	9,267	...	9,158	9,376
South Canara	198	8,690	...	8,492	8,888
Ganjam, Hill Tracts of Orissa..	117	2,515	...	2,398	2,632
Vizagapatam, Jeypore ...	182	2,357	...	2,175	2,539
Total...	25,822	161,783	...	135,961	187,605
Vaccine Depôt, Madras ...	798	3,674	...	2,876	4,472
Cantonment of Bangalore ...	403	1,103	...	700	1,506
Do. of Secunderabad	1,800	474	1,326	...	2,274
Do. of Kamptee ...	312	325	...	13	637
Total...	3,313	5,576	1,326	3,589	8,889
General Total...	29,135	167,359	1,326	139,550	196,494

Abstract.

Vaccine Districts	25,822	161,783	...	135,961	187,605
Vaccine Depôt	798	3,674	...	2,876	4,472
Three Military Cantonments..	2,515	1,902	613	...	4,417
Total...	29,135	167,359	613	138,837	196,494

General Return of Vaccination by Medical Subordinates for the year 1869.

Divisions and Forces.	Town.		Regiment.		Regi-mental Lines.		Regi-mental Bazaar.		Bazaar.		Canton-ment.		Par-cherry.		Jail.		Village.		Total.		Successful.	Unsuccessful.	General Total Males and Females.	Ratio per cent. of success.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.				
Presidency & Northern Districts ...	1,631	502	634	410	...	...	...	...	...	...	...	...	...	...	1,722	176	7	6	3,994	1,094	3,616	1,472	5,088	71·069
Southern Division ...	1,951	1,062	388	190	...	...	...	...	...	...	...	...	...	...	1,749	231	...	...	4,088	1,483	4,034	1,537	5,571	72·410
Mysore and Ceded Districts	503	126	592	275	...	...	...	...	...	...	...	...	...	...	1,042	55	...	...	2,137	456	1,571	1,022	2,593	60·586
Hyderabad Subsidiary Force	218	235	266	199	...	...	...	...	...	...	51	19	...	..	...	...	...	...	535	453	623	365	988	63·057
Nagpore Subsidiary Force	...	...	397	228	...	...	...	...	...	...	...	...	...	...	...	...	...	...	397	228	442	183	625	70·72
Pegu Division ...	...	...	22	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22	23	29	16	45	64·444
Burmah and Straits.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	4,303	1,925	2,299	1,325	...	...	...	...	...	...	51	19	...	...	4,513	462	7	6	11,173	3,737	10,315	4,595	14,910	69·114

Statement exhibiting the Strength and Pay of the present Establishment of the Vaccine Department (and Expenditure incurred on account of Batta, &c.,) during the year 1869.

How employed. Attached to the following Districts.	Number of each: Supt.-General.	District Supts.	1st-Class Vaccinators.	2nd-Class Vaccinators.	Peons.	Salary per mensem of each Grade.	RS.	Amount of Salary drawn during the year. RS.	A.	P.	Rice issued. Marcalls.	Seers.	Value. RS.	A.	P.	Batta. RS.	A.	P.
Supt.-Genl. of Vaccine ...	1	...	...	...	...	Supt.-General ...	1,360	16,320	0	0	...	...	...	...	...	...	...	...
Madras Town ...	...	...	...	...	...	District Supt. ...	70	2,014	10	1	...	...	...	...	...	9	5	0
						1st-Class Vaccinator	18											
	...	1	4	7	3	2nd do.	10				1,326	8	1,759	9	8	...	...	...
						Peon	7											
Vaccine Depôt ...	...	...	...	...	...	1 Sweeper ...	$3\frac{1}{2}$	484	6	10	...	...	...	...	...	...	...	...
						District Supt. ...	70											
Madras District ...	...	1	4	5	...	1st-Class Vaccinator	18	2,401	11	7	...	...	...	...	...	13	10	6
						2nd do.	10											
South Arcot	...	1	3	6	...	Do.	...	2,426	12	5	...	...	...	...	...	...	...	...
North Arcot	...	1	4	5	...	Do.	...	2,167	2	5	...	...	...	...	...	23	2	4
Tanjore	...	1	4	7	...	Do.	...	2,371	1	0	...	...	...	...	...	2	0	0
Trichinopoly	...	1	4	5	...	Do.	...	2,385	14	11	...	...	...	...	...	...	...	...
Madura	...	1	5	5	...	Do.	...	2,444	9	7	...	...	...	...	...	...	...	...
Tinnevelly	...	1	4	7	...	Do.	...	2,304	7	7	...	...	...	...	...	9	0	0
Godavery	...	1	4	6	...	Do.	...	2,202	5	1	...	...	...	...	...	...	...	...
Kistna	...	1	4	5	...	Do.	...	2,332	7	0	...	...	...	...	...	0	6	0
Ganjam	...	1	4	6	...	Do.	...	2,511	15	11	...	...	...	...	...	20	1	0

Vizagapatam	...	1	4	6	...	Do.	...	2,347	8	6	...	...	...	...	...	3	14	0
Kurnool	...	1	4	7	...	Do.	...	2,073	5	10	...	...	...	...	...	0	8	0
Bellary	...	1	6	8	...	Do.	...	3,120	4	2	...	...	...	...	...	...	...	...
Cuddapah	...	1	4	6	...	Do.	...	2,105	7	6	...	...	...	...	...	1	0	0
Nellore	...	1	4	6	...	Do.	...	2,274	9	7	...	...	...	...	...	...	...	...
Coimbatore	...	1	6	5	...	Do.	...	2,781	15	8	...	...	...	...	...	5	12	0
Salem	...	1	5	7	...	Do.	...	2,661	4	1	...	...	...	...	...	...	...	...
Malabar	...	1	4	7	...	Do.	...	2,390	6	0	...	...	...	...	...	0	11	0
South Canara	...	1	5	6	...	Do.	...	2,601	2	8	...	...	...	...	...	4	1	6
Ganjam, Hill Tracts of Orissa	...	1	6	...	...	Do.	...	2,214	13	1	...	...	...	...	...	13	4	0
Vizagapatam, Jeypore ...	...	1	6	...	...	Do.	...	3,101	1	0	...	...	...	...	...	12	9	0
Supt. of Vaccination of the Sub-Collectorate, Bellary, now in charge of Supt.-General's Office... ...	...	1	...	...	...	Superintendent ...	70	490	0	0	...	...	...	...	...	...	...	...
Military Cantonments.																		
Bangalore	...	...	1	1	...	1st-Class Vaccinator. 2nd do.	18 10	336	0	0	...	...	...	...	...	...	...	...
Secunderabad	...	...	1	1	...	2nd-Class Vaccinator.	10	260	0	0	...	...	...	...	...	...	...	...
Kamptee	...	...	...	1	...	Do.	10	120	0	0	...	...	...	...	...	...	...	...
Total...	1	23	100	125	3	...		71,245	6	6	1,326	8	1,759	9	8	119	4	4

Miscellaneous Returns of Vaccination in

Zemindaries, Dispensaries, Municipalities, &c.	UNDER		
	Europeans and East Indians.		Na
			Hin
	Males.	Females.	Males.
Private Vaccinators	...	1	130
Zemindaries.			
Ramnad	...	1	196
Shevagunga	...	...	27
Poonganoor	...	...	166
Bungaroopalim	...	...	8
Pittapoor	3	3	10
Nuzeed	...	...	17
Carvettinugger	...	...	8
Vizagapatam	3	1	442
Ganjam	...	...	122
Poodoocottah	1	...	142
Vencatagherry	...	...	19
Total...	7	6	1,287
Madras Railway	1	2	...
Dispensaries.			
Cuddalore	...	2	45
Negapatam	...	3	28
Manargoody	1	...	36
Old Town, Cuddalore	...	...	...
Mercara	4	1	17
Total...	6	8	126
Municipalities.			
Berhampore	3	1	12
Bimlipatam	1	6	...
Vizagapatam	2	8	6
Cuddapah	...	...	14
Trichinopoly	11	13	286
Cochin	4	3	1
Guntoor	1	2	8
Nellore	7	4	31
Bellary	22	11	189
Tanjore	1	...	48
Dindigul	1	1	49
Chicacole	1	1	1
Vellore	4	1	56
Combaconum	...	1	123
Salem	3	1	214
Madura	...	...	81
Conjeveram	...	...	73
Total...	61	53	1,192
Grand Total...	74	67	2,605

the Madras Presidency for the year 1869.

ONE YEAR OF AGE.						
TIVES.			Total.		Result of Operations.	
dns.	Mahomedans.					
Females.	Males.	Females.	Males.	Females.	Successful.	Unsuccessful.
90	18	18	148	109	241	16
127	10	13	206	141	346	1
35	2	2	29	37	65	1
132	...	...	166	132	292	6
7	...	...	8	7	14	1
4	...	...	13	7	15	5
14	2	4	19	18	32	5
5	...	4	8	9	17	...
414	5	2	450	417	752	115
119	...	...	122	119	222	19
141	10	3	153	144	275	22
19	1	...	20	19	36	3
1,107	48	46	1,342	1,159	2,307	194
1	...	...	1	3	3	1
21	4	2	49	25	74	...
39	16	7	44	49	77	16
34	...	...	37	34	68	3
...	...	...	...	...	...	...
24	6	9	27	34	43	18
119	26	18	158	145	265	38
7	1	1	16	9	19	6
...	...	...	1	6	5	2
12	4	2	12	22	30	4
9	17	11	31	20	39	12
209	65	75	362	297	535	124
1	...	...	5	4	7	2
20	5	7	14	29	35	8
35	7	9	45	48	89	4
176	112	102	323	289	590	22
28	1	4	50	32	82	...
54	9	4	59	59	117	1
3	...	...	2	4	3	3
68	24	28	84	97	162	19
42	1	1	124	44	143	25
185	14	11	231	197	419	9
78	...	...	81	78	145	14
52	6	2	79	54	119	14
979	266	257	1,519	1,289	2,539	269
2,205	340	321	3,019	2,593	5,111	501

ZEMINDARIES, DISPENSARIES, MUNICIPALITIES, &c.	ABOVE		
	Europeans and East Indians.		NA
			Hin
	Males.	Females.	Males.
Private Vaccinators	...	...	657
ZEMINDARIES.			
Ramnad	...	...	591
Shevagunga	...	...	355
Poonganoor	...	...	687
Bungaroopalim	...	...	92
Pittapoor	9	...	633
Nuzeed	...	...	162
Carvettinugger	...	...	49
Vizagapatam	1	2	4,371
Ganjam	...	...	5,334
Poodoocottah	...	...	1,836
Vencatagherry	...	...	460
Total...	10	2	15,227
Madras Railway	1	...	4
DISPENSARIES.			
Cuddalore	...	...	257
Negapatam	4	4	214
Manargoody...	...	...	315
Old Town, Cuddalore	...	...	38
Mercara	5	...	366
Total...	10	4	1,194
MUNICIPALITIES.			
Berhampore...	9	6	255
Bimlipatam	...	...	94
Vizagapatam	55	12	356
Cuddapah	1	...	147
Trichinopoly...	2	...	342
Cochin	11	8	273
Guntoor	4	3	168
Nellore	16	5	475
Bellary	7	5	181
Tanjore	2	3	566
Dindigul	...	...	373
Chicacole	6	...	152
Vellore	3	1	171
Combaconum	...	...	540
Salem	2	...	269
Madura	...	...	390
Conjeveram	...	...	360
Total...	118	43	5,112
Grand Total...	138	49	21,533

the Madras Presidency for the year 1869.—(Continued.)

ONE YEAR OF AGE.

TIVES.			Total.		Result of Operations.	
dus.	Mahomedans.					
Females.	Males.	Females.	Males.	Females.	Successful.	Unsuccessful.
568	36	39	693	607	1,212	88
347	14	14	605	361	965	1
340	6	5	361	345	706	...
464	...	...	687	464	1,121	30
65	...	1	92	66	151	7
314	2	...	644	314	685	273
136	25	24	187	160	297	50
11	5	6	54	17	60	11
3,166	16	14	4,388	3,182	6,790	780
4,153	4	2	5,338	4,155	8,831	662
1,615	40	44	1,876	1,659	3,337	198
378	14	15	474	393	840	27
11,557	162	164	15,399	11,723	24,995	2,127
1	...	...	5	1	6	...
247	7	5	264	252	510	6
211	44	41	262	256	451	67
235	...	...	315	235	525	25
35	13	8	51	43	68	26
176	21	13	392	189	407	174
905	85	67	1,289	976	1,967	298
108	2	1	266	115	319	62
96	...	...	94	96	165	25
67	15	3	426	82	371	137
46	50	29	198	75	201	72
146	53	15	397	161	479	79
195	15	2	299	205	334	170
120	53	47	225	170	320	75
357	110	36	601	398	768	231
151	96	65	284	221	478	27
491	20	16	588	510	1,037	61
229	28	22	401	251	564	88
62	20	2	178	64	154	88
99	25	36	199	136	292	43
219	13	6	553	225	737	41
202	17	14	288	216	490	14
332	1	2	391	334	669	56
268	3	4	363	272	517	118
3,188	521	300	5,751	3,531	7,895	1,387
15,650	768	531	22,439	16,230	34,857	3,812

Zemindaries, Dispensaries, Municipalities, &c.	GENERAL				
	Europeans and East Indians.		NA		
			Hindus.		Maho
	Males.	Females.	Males.	Females.	Males.
Private Vaccinators ...	...	1	787	658	54
Zemindaries.					
Ramnad	...	1	787	474	24
Shevagunga	...	...	382	375	8
Poonganoor	...	...	853	596	...
Bungaroopalim ...	...	...	100	72	...
Pittapoor	12	3	643	318	2
Nuzeed	...	...	179	150	27
Carvettinugger ...	...	...	57	16	5
Vizagapatam	4	3	4,813	3,580	21
Ganjam	...	...	5,456	4,272	4
Poodoocottah	1	...	1,978	1,756	50
Vencatagherry ...	...	...	479	397	15
Total...	17	8	16,514	12,664	210
Madras Railway ...	2	2	4	2	...
Dispensaries.					
Cuddalore	...	2	302	268	11
Negapatam	4	7	242	250	60
Manargoody	1	...	351	269	...
Old Town, Cuddalore ...	...	...	38	35	13
Mercara	9	1	383	200	27
Total...	16	12	1,320	1,024	111
Municipalities.					
Berhampore	12	7	267	115	3
Bimlipatam	1	6	94	96	...
Vizagapatam	57	20	362	79	19
Cuddapah	1	...	161	55	67
Trichinopoly	13	13	628	355	118
Cochin	15	11	274	196	15
Guntoor	5	5	176	140	58
Nellore	23	9	506	392	117
Bellary	29	16	370	327	208
Tanjore	3	3	614	519	21
Dindigul	1	1	422	283	37
Chicacole	7	1	153	65	20
Vellore	7	2	227	167	49
Combaconum	...	1	663	261	14
Salem...	5	1	483	387	31
Madura	...	...	471	410	1
Conjeveram ...	...	...	433	320	9
Total...	179	96	6,304	4,167	787
Grand Total...	212	116	24,138	17,855	1,108

the Madras Presidency for the year 1869.—(Concluded.)

TOTAL.						
TIVES.	All Classes.		Successful.	Unsuccessful.	General Total Males and Females.	Ratio per cent. of success.
medans.						
Females.	Males.	Females.				
57	841	716	1,453	104	1,557	93·320
27	811	502	1,311	2	1,313	99·847
7	390	382	771	1	772	99·870
...	853	596	1,413	36	1,449	97·515
1	100	73	165	8	173	95·375
...	657	321	700	278	978	71·574
28	206	178	329	55	384	85·677
10	62	26	77	11	88	87·5
16	4,838	3,599	7,542	895	8,437	89·391
2	5,460	4,274	9,053	681	9,734	93·003
47	2,029	1,803	3,612	220	3,832	94·415
15	494	412	876	30	906	96·688
210	16,741	12,882	27,302	2,321	29,623	92·164
...	6	4	9	1	10	90·000
7	313	277	584	6	590	98·966
48	306	305	528	83	611	86·415
...	352	269	593	28	621	95·491
8	51	43	68	26	94	72·340
22	419	223	450	192	642	70·093
85	1,447	1,121	2,232	336	2,568	86·915
2	282	124	338	68	406	83·251
...	95	102	170	27	197	86·294
5	438	104	401	141	542	73·985
40	229	95	240	84	324	74·074
90	759	458	1,014	203	1,217	83·319
2	304	209	341	172	513	66·471
54	239	199	355	83	438	81.050
45	646	446	857	235	1,092	78·479
167	607	510	1,068	49	1,117	95·613
20	638	542	1,119	61	1,180	94·830
26	460	310	681	89	770	88·441
2	180	68	157	91	248	63·305
64	283	233	454	62	516	87·986
7	677	269	880	66	946	93·023
25	519	413	909	23	932	97·532
2	472	412	814	70	884	92·081
6	442	326	636	132	768	82·812
557	7,270	4,820	10,434	1,656	12,090	86·302
852	25,458	18,823	39,968	4,313	44,281	90·259

Table showing the Disbursements of Vaccine Lymph in the several Vaccine Districts of the Presidency during the year 1869.

Districts, &c.	Vaccine Subjects.	Capillary Tubes.	Plates of Glass.	Ivory Points.	Crusts.	Lymph Bottles.
Vaccine Depôt, Madras / Madras Town ...	89	199	80	39	...	...
Madras District ...	...	...	7	...	...	...
South Arcot ...	...	...	7	...	...	...
North Arcot	...	...	...	...	...	...
Tanjore	...	...	40	...	...	...
Trichinopoly ...	...	...	10	...	...	...
Madura	...	36	2	...	...	...
Tinnevelly	...	...	13	...	...	...
Godavery	...	33	...	...	...	...
Kistna	...	23	...	...	...	...
Ganjam	...	...	...	...	...	...
Vizagapatam ...	2	18	2	...	...	...
Kurnool	...	39	...	...	...	...
Bellary	...	...	135	...	70	...
Cuddapah	...	22	2	...	...	...
Nellore	...	2	...	...	...	...
Coimbatore	1	26	29	...	...	...
Salem	...	12	...	...	...	...
Malabar	...	46	8	...	...	...
South Canara ...	...	9	12	...	...	...
Ganjam, Hill Tracts of Orissa	...	...	11	...	...	...
Vizagapatam, Jeypore	...	11	6	...	...	...
Total ...	92	476	364	39	70	...

Table exhibiting the Casualties which occurred in the Department during the year 1869.

Districts, &c.	Vaccinators resigned.	Vaccinators dismissed.	Vaccinators deserted.	Vaccinators died.	Hospital Assistants removed.	Vaccinators dismissed from criminal prosecution.
Vaccine Depôt, Madras / Madras Town ...	...	1	2	...	...	2
Madras District ...	...	1	1	...	...	...
South Arcot	...	...	...	...	...	...
North Arcot	1	2	2	...	...	1
Tanjore	1	...	...	1	...	...
Trichinopoly... ...	...	...	1	1	...	...
Madura	...	...	...	...	...	...
Tinnevelly	1	3	...	...	...	...
Godavery	...	...	...	...	...	...
Kistna	...	...	1	...	...	...
Ganjam	...	...	1	...	...	...
Vizagapatam ...	1	...	1	...	...	...
Kurnool	1	3	10	...	...	...
Bellary	1	...	...	...	...	...
Cuddapah	...	...	5	...	...	...
Nellore	...	...	...	...	1	...
Coimbatore	2	...	...	...	...	...
Salem	...	3	1	1	...	...
Malabar	2	...	2	...	...	...
South Canara ...	...	...	...	...	1	...
Ganjam, Hill Tracts of Orissa	...	...	...	1	...	...
Vizagapatam, Jeypore...	3	1	1	...	...	...
Total ...	13	14	28	4	2	3

General Abstract of Vaccination in the Madras Presidency for the year 1869.

—	Total Number vaccinated.		Result of Operations.		General Total Males and Females.	Ratio per cent. of success.
	Males.	Females.	Successful.	Unsuccessful.		
Vaccine Districts	104,586	83,019	172,025	15,580	187,605	91·695
Vaccine Depôt	1,475	2,997	4,261	211	4,472	95·281
Three Military Cantonments ...	2,704	1,713	3,638	779	4,417	82·363
Divisions and Forces ...	11,173	3,737	10,315	4,595	14,910	69·114
Zemindaries	15,900	12,166	25,849	2,217	28,066	92·100
Railways	6	4	9	1	10	90·000
Civil Dispensaries ...	1,441	1,117	2,223	335	2,558	87·294
Municipalities	7,270	4,820	10,434	1,656	12,090	86·302
Private Vaccinators ...	841	716	1,453	104	1,557	93·320
Total ...	145,396	110,289	230,207	25,478	255,685	90·035

JOHN SHORTT, M.D., Surgeon,
Superintendent-General of Vaccination,
Madras Presidency.

PUBLIC DEPARTMENT.

Proceedings of the Madras Government.

Read the following letters from the Inspector-General, Indian Medical Department :—

(Here enter 16th June 1869 and 16th August 1870, Nos. 234 & 199).

Order thereon, 11th January 1871, No. 39.

The Inspector-General, Indian Medical Department, submits, with his letters above recorded, the Reports of the Vaccine Department for the years 1868 and 1869.

2. The Vaccine Department having been re-organized in 1868, and being for the first time complete in 1869, the Inspector-General remarks that no full or detailed comparison of the results of these years can be instituted with those of previous years.

3. In 1869 the revised establishment consisted of—

1 Superintendent-General,
23 Superintendents,
100 First-class Vaccinators,
155 Second-class Vaccinators,
3 Peons, and
1 Sweeper,

and the actual cost of the establishment during the year was Rupees 71,276.

4. A comparison of the aggregate number of persons vaccinated in the year 1867, with 1868 and 1869, shows a decrease of 6,053 in 1868, and of 14,064 in 1869. The decrease between 1868 and 1869 is 9,011. This decrease is attributed to a falling off in the number vaccinated by Medical Subordinates and Vaccinators unconnected with the Vaccine Department.

1867	270,749
1868	264,696
1869	255,685

5. The following comparison of the work done by the Vaccine Department alone shows there was a very considerable falling off in 1868, and in 1869 there was a slight improvement over 1868 :—

1867	223,310
1868	194,537
1869	198,051

6. The sex and caste of the number operated upon by the Vaccine Department were as follow :—

Males.

	1867.	1868.	1869.
Europeans and East Indians ...	1,861	2,194	1,003
Hindoos	132,896	123,214	124,428
Mahomedans	8,730	9,101	8,792

Females.

	1867.	1868.	1869.
Europeans and East Indians...	1,063	1,717	691
Hindoos	106,977	94,026	100,725
Mahomedans	4,923	5,094	5,136

7. The general return of vaccination by the Medical Subordinates merely gives the sex, but it is desirable that the return should give, in future, the caste also, as shown by the Vaccine Department.

8. The numbers vaccinated in the several districts, excluding the Hill Tracts, during the years 1868 and 1869, vary very considerably. No comparison can be made with 1867, the numbers vaccinated being given for "circles" and not for districts. In 1868 the lowest number was 814 in Kurnool, and the highest in Tanjore 21,745. In 1869 the lowest number was again in Kurnool 2,271, and the highest in South Arcot 15,064. The Superintendent-General, in paragraph 45 of his Report for 1868, states that the greatest and most determined opposition exists in the Kurnool District, and adds that such opposition is "supported in many instances by the village officials themselves, who take the lead in obstructing the progress of vaccination." The attention of the Collector of Kurnool will be drawn to these remarks, with a view to his adopting such measures as will effectually prevent the village officials from the course stated to be followed by them.

	1868.	1869.
Vaccine Depôt	4,940	4,472
Madras Town	11,140	5,484
Madras District	1,734	7,302
South Arcot	6,175	15,064
North Arcot	8,392	14,869
Tanjore	21.745	13,650
Trichinopoly	2,386	7,668
Madura	10,307	10,927
Tinnevelly	7,480	8,851
Godavery	14,586	9,603
Kistna	10,287	10,323
Ganjam	1,246	3,328
Vizagapatam	1,032	4,075
Kurnool	814	2,271
Bollary	12,324	10,170
Cuddapah	5,569	3,596
Nellore	3,119	13,789
Coimbatore	18,210	13,515
Salem	17,071	9,685
Malabar	17,338	9,376
South Canara	3,731	8,888
Ganjam Hill Tracts ...	6,765	2,632
Vizagapatam, Jeypore ...	454	2,539

9. The cost of each operation varied in 1868 from one anna and ten pies in North Arcot to Rupees 3-8-6 in the Hill Tracts of Jeypore. In 1869 it was two annas and six pies in South Arcot, and Rupees 1-3-7 in Jeypore.

10. The per-centage of successful operations also varied during the years 1867, 1868, and 1869, viz. :—

	Maximum.	Minimum.
1867	97·41	77·32
1868	98·69	67·53
1869	97·99	84·23

11. It is observed that the Inspector-General, Indian Medical Department, has called the attention of Medical Officers and Subordinates to the falling off in the number vaccinated by them.

12. The Government notice with satisfaction the successful working of the Vaccinators employed by Zemindars.

13. The Government concur in the views expressed by the Inspector-General, Indian Medical Department, in his letter, dated the 16th August last, with reference to Dr. Shortt's recommendation to render vaccination compulsory, or the alternative to enforce the complete isolation of every case of small-pox. They consider that the time has not yet arrived for legislation on this subject.

14. The Inspector-General will be informed that any recommendation he may have to make in respect to any additional aid, which the Superintendent-General may require in the discharge of his office work, should be submitted for the consideration of Government separately.

15. The Government have recorded their opinion in respect of peons for the Vaccine Department in G. O., dated the 22nd July 1868, No. 883. They are not prepared, at present, to re-consider their decision.

(True Extract.)

R. S. ELLIS,
Chief Secretary.